

FLIGHT

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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EDITORIAL COMMENT.

Zeppelin Murders and Reprisals.

If by merely passing resolutions at meetings, got together as the result of some newspaper campaign and supported by a number of men already in the public eye who intend to keep there and by others who hope to become known by means of publicity gained thereby, the aims of those resolutions were automatically carried to a successful finality, what a lot of evil doings could forthwith be rectified and their perpetrators brought, by physical reasoning, to see the error of their ways. But it is a regrettable fact that as a rule the decisions arrived at by most of such gatherings are merely a formal way of giving decent burial rites to the perfectly laudable wishes of the conveners of the meetings, after having afforded a fitting opportunity for the letting off of a deal of superfluous energy in the form of hot air to relieve the pent up feelings brought about by some particular incident or grievance. In this category we are afraid must be classed the meeting convened last week in the City for the purpose of advocating a policy of reprisals for the Zeppelin raids. The great point made was that these raids had got to be stopped, and the way it was decided to stop them was by passing a resolution, moved by Mr. Joynson-Hicks, M.P., seconded by Mr. Ernest Jardine, M.P., and carried enthusiastically and unanimously as follows:—"That this mass meeting of City

men states its definite belief that the only effectual method of putting a stop to Zeppelin raids upon London and other English towns consists in the formal announcement on the part of this country of a systematic policy of reprisal raids by British, or British and French, aeroplanes upon towns in Germany, and that this meeting hereby calls upon His Majesty's Government to render protection to the lives and property of British subjects through the issue and prompt fulfilment of such a declaration."

That the emphatic sense of the meeting should be that a policy of reprisals in the form of an "eye for an eye" was the *only* effectual method of stopping the raids, would seem to warrant little attention being given to its recommendations. The sort of argument which prevailed may be gathered from the demand that we "must at once send 200 aeroplanes at the very least to circle round and round Cologne, Coblenz, and other towns," with the avowed object of indiscriminately slaughtering German women and children. Surely the opposite to what is wished would much more likely be brought about. It would be the much-hated English who would then be the murderers, and the German High Command would be called upon by the German populace to abandon for the future all that tender consideration which they had so far exhibited towards the English population, during their Zeppelin raids upon London and elsewhere, by only dropping bombs on the "fortifications," docks, and such like legitimate quarry. For the future these raiders must have no compunction—so the German public would maintain—as to respecting either civilians or unfortified districts: Just let go their bombs under the same shameful conditions which had been practised by the English themselves, and so on, *ad infinitum*. For be it remembered, so far as the German general public are concerned, they have been fed to repletion upon the great deeds of the Zeppelin heroes, in fearlessly voyaging over the seas to England, and by descending to within a few hundred feet of the ground, have thus carefully selected the military objects of their attacks. Under no conditions have they bombed any spots other than actual forts or those pertaining to military services. If a civilian or two happen to be in those forts at the time of attack, well that's *their* business. They should see they do not get blown into such dangerous places. Hence, instead of our reprisals in the form advocated having the effect of pressure being brought upon the German authorities to stay their methods of murder, blind rage increased tenfold would follow and the exact

opposite to the desired effect would result. We do not doubt but that in good time the British Flying Services and those of our Allies could give a most striking account of themselves in this matter of reprisals, but we cannot help feeling that, in spite of the resolution passed, there *are* other means of curtailing, if not positively stopping, the enterprise of these air visitors, and that before very long they will be apparent. As to what the feelings of the nation and neutrals would be after the event—*i.e.*, peace—were we to follow the murderous methods of the Germans, we think there cannot be two opinions. So far we have endeavoured to carry out the necessary slaughter of our enemies in as gentlemanly a manner as possible.

Let the same tactics prevail until the end—always assuming that that end will be in our favour—it will then be time enough to exact reprisals in the shape of an “eye for an eye” against those personally who have been responsible for the inhuman proceedings and against those who have with evident pleasure carried out their superiors’ commands. We have long since advocated this line of procedure, as also the advisability of letting it be known officially and definitely to those it may concern that this will be the course adopted when the squaring up of accounts takes place. If this does not have the desired effect we hardly think anything else will, and our only plan is to set to work and endeavour to counter the attacks by legitimate means until we can control their tactics within reasonable limits, in like manner to the eliminating precautions which have proved so effectual against submarine depredations. In the meantime, the more legitimate raids upon enemy strongholds we can make, the better. These impress the German High Command in a much greater degree than anything that might be attempted in the way of killing off a few batches of their women and children. The German official mind has got far beyond consideration for such small fry as that.

Possibly the real object of the Cannon Street meeting was not after all the passing of the resolution already given above. There was a second resolution put to the meeting towards the end. This was in the name of Mr. Charles Palmer, and gives reason to think furiously as to whether this apparently minor object was not in reality the main one of the meeting. There was such a natural and innocent ring about its wording that in such a gathering it would not be a matter for much concern to get it passed with acclamation. This little

side issue was to the effect that “this meeting, having regard to the great part which the Air Services are already playing in this war by land and sea, and to their yet much greater possibilities in the immediate future, urges the necessity of the speedy formation of a Ministry of the Air to take complete and independent charge of the naval and military forces of the country.”

Seconded by Sir George Makgill, this resolution was carried unanimously—no, we’re wrong there. With one dissentient, who possibly, after all, may have had very good reasons for his objection. What these were we have not learnt as, when remonstrated with by a member of the audience for his attitude, the meeting was of such a responsible and discriminating character, that they at once fell upon the member of the audience who had tackled the dissentient and promptly ejected *him* with “reprisals” of an extremely convincing order. What became of the man who did not think so much of that “minister of the air” suggestion, deponent sayeth not—but his views *might* be worth recording.

Reprisals or no reprisals, however, it is to be hoped that Mr. Asquith’s views expressed to the house of Commons on Friday are correct that “the service presided over by Sir Percy Scott will deal effectively with any further attempts at indiscriminate destruction of property.” Let us hope lives also.

Whilst fully recognising the many difficulties in the way of dealing really successfully with the Zeppelin night marauders, we shall be glad to see more definite results from the appointment of Sir Percy Scott, since he has had a more or less free hand. His experience during the last raid should serve him in good stead, and it is to be hoped that his scheme of operations will not be too long in really getting going, so that the visitors may not get off from their future expeditions entirely “Scot” free.

The ideal plan for dealing with these airships is without question to stop them at the coast, with a second barrier somewhere about within a radius of 30 miles of the Metropolis. So many difficulties are present for aeroplanes to get their work in, not forgetting, if they use bombs, the remedy might be as bad as the disease, that those who *know* that this is the proper method to drive off the German air fleet should lose no time in transferring their certain knowledge to the proper quarter. But then many of these armchair experts would be puzzled to explain lucidly the difference between a biplane and a monoplane.

THE ROLL OF HONOUR.

THE Secretary of the Admiralty has announced the following casualties:—

Under date October 13th:

Seriously Injured.

Flight Sub-Lieutenant Grahame G. Dawson, R.N.

Under date October 18th:

Slightly Wounded.

Temporary Lieut.-Commander John W. Stocks, R.N.V.R.

Undated:

Previously reported Missing, now reported a Prisoner of War.

Flight Sub-Lieutenant Richard C. Petter, R.N.

Died.

Sergeant W. L. Stone, R.M.A., Anti-Aircraft Brigade.

The following casualties in the Expeditionary Force have been reported from General Headquarters:—

Undated:

Wounded.

Lieutenant A. Somervail, 4th King’s Own Scottish Borderers (T.F.), attached R.F.C.

Missing.

Second Lieutenant H. B. Stubbs, Royal Flying Corps.

The following casualty among the Indian Forces has been reported from the Persian Gulf:—

Undated:

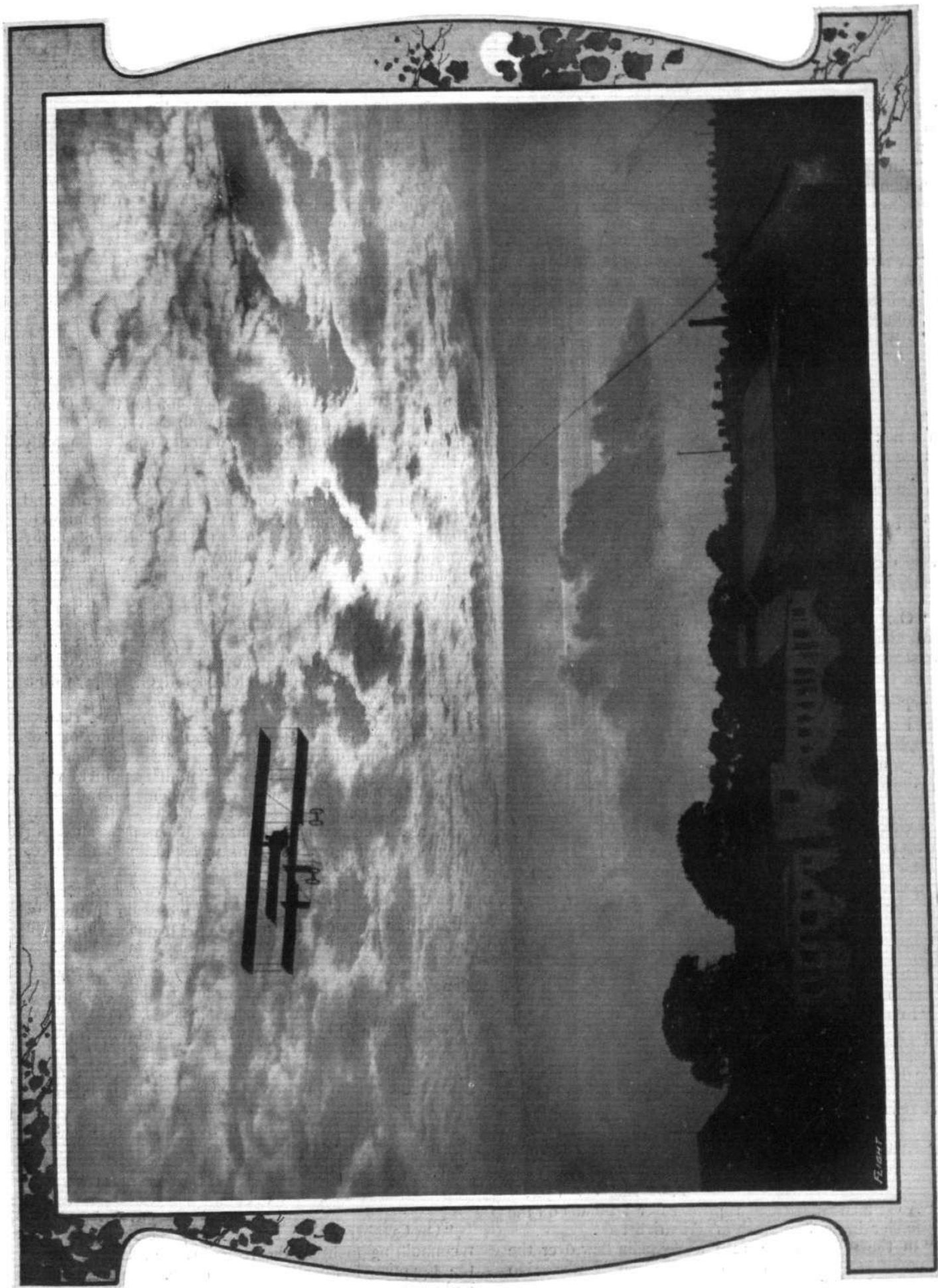
Wounded.

Second Lieutenant E. J. Fulton, 1st Lancers, attached R.F.C.

The following casualty in the Canadian Contingent with the Expeditionary Force has been reported from General Headquarters:—

Missing.

Lieutenant D. Leeson, 7th Canadian Infantry Bn., attached R.F.C.



AT EVENTIDE WHEN THE BIRDS COME HOME TO ROOST.—A cloud study at Hendon.

AIRCRAFT WORK AT THE FRONT.

OFFICIAL INFORMATION.

French.

Paris, Oct. 13th. Afternoon.

"A SQUADRON of 19 aeroplanes dropped 140 bombs on the station of Bazancourt, where enemy movements had been reported.

"Another squadron of 18 aeroplanes bombarded the junction of Achiet-le-Grand, near Baraume. Other machines also bombarded the railway line near Warmeriville."

Paris, Oct. 14th. Evening.

"A squadron of 20 aeroplanes to-day bombarded the station of Bazancourt, on the rear front of Champagne. One of our aeroplanes brought down a German captive balloon, which collapsed south of Monthois.

"An enemy aeroplane was brought down by one of ours north of the Aisne. It fell in the German lines north of Bucy-le-Long."

Paris, Oct. 16th. Evening.

"A squadron of aeroplanes to-day bombarded the Sablons Station at Metz. Numerous hits were observed on the station itself and on a moving train, which had to stop. A pointsman's post was blown up."

Paris, Oct. 17th.

"In the Dardanelles the first fortnight of October was calm. . . . Our aircraft successfully bombarded every day the various establishments and camps of the enemy."

Paris, Oct. 17th. Afternoon.

"Our aircraft bombarded on the night of the 15th-16th the German victualling centres of Mezières and Azoudange and the station of Avricourt."

Paris, Oct. 17th. Evening.

"The Germans having again recently carried out aerial bombardments of English towns, and one of their aeroplanes yesterday having dropped two bombs on Nancy, a squadron of our aeroplanes to-day bombarded the town of Trèves, on which thirty shells were dropped."

Paris, Oct. 19th. Afternoon.

"A party of our aviators bombarded on the night of the 17th the German aviation ground at Burlioncourt, north-east of Chateau Salins. Some hangars and shelters were obviously demolished."

Russian.

Petrograd, Oct. 12th.

"German seaplanes flying over the Gulf of Riga were driven off by our destroyers.

"In the Tukkum district a Russian Ilya Murometz aeroplane threw some scores of bombs on an enemy transport and artillery column.

"Our aviators, assisting the field troops, threw 50 bombs on the enemy lines on the front of Lakes Medun and Drisviaty."

Petrograd, Oct. 13th.

"In the Riga region, east of Lake Babit, a German hydroplane was captured."

Petrograd, Oct. 14th.

"A German aeroplane dropped several bombs on the Remersh railway line, north of Friedrichstadt.

"In the night of the 12th a Zeppelin flew over the region of Dvinsk and dropped about 50 bombs. No one was injured."

Petrograd, Oct. 16th.

"Enemy aeroplanes again threw bombs on the station at Rotemershov, north of Friedrichstadt.

"During the night of October 14th-15th, a Zeppelin threw fifteen bombs on Minsk. Our artillery immediately drove the Zeppelin off."

Petrograd, Oct. 17th.

"Our aeroplanes yesterday dropped several scores of bombs on trains and other material in the enemy's rear."

Petrograd, Oct. 19th.

"Our battle aeroplanes yesterday dropped at Mitau Garrozen, Grosseckau, and Neugot as many as 50 bombs on establishments behind the German front."

Serbian.

Nish, Oct. 9th.

"According to supplementary information, enemy aeroplanes recently dropped bombs on four of our hospitals, although the Geneva Red Cross was plainly visible."

Nish, Oct. 12th.

"In the afternoon of October 6th the Semendria and Kragoujevatz roads and the space between them were under the enemy's fire. During the bombardment enemy aeroplanes directed the fire, following parties of the fleeing inhabitants, and reporting their whereabouts."

German.

Berlin, Oct. 13th.

"During last night one of our airships bombarded the fortified town of Dvinsk, which is full of troops, with a good number of bombs."

Berlin, Oct. 15th.

"On the night of the 13th-14th inst., one of our airships bombarded the railway stations at Chalons and Vitry-le-François, which are, from a military point of view, important for the prosecution of the enemy operations.

"One of our airships freely bombarded the railway station at Minsk, where a considerable transportation of troops was going on. Five heavy explosions took place, and a great fire was observed."

Berlin, Oct. 17th.

"In an aerial battle north-east of Souain, Lieutenant Boelke brought down a French battle-plane. This is the fifth enemy aeroplane brought down by him recently."

Berlin, Oct. 18th.

"Yesterday German air squadrons attacked the fortress of Belfort, drove off the enemy aviators, and dropped 80 bombs on the fortress, whereby a number of fires were caused."

Berlin, Oct. 19th.

"In the region of Smoiwy a French biplane, which was being piloted by a Russian staff officer, and which was equipped with an English machine gun, was shot down by one of our battle aeroplanes."

Turkish.

Constantinople, Oct. 13th.

"On October 10th a hostile aeroplane undertaking a reconnoitring flight in the region east of El Arish (on the Egyptian frontier) was shot down. The aeroplane and aviators were captured. No further news."

THE "X" AIRCRAFT RAIDS.

IN view of the decision of the Government not to allow details of aircraft raids to be published, we are as before (see issue of June 11th, 1915) giving to each one an index number. Eventually, when details are available, we shall give the respective information under these index numbers, which will facilitate easy reference to each particular raid.

The following has been officially issued, the date in brackets indicating when the statement was issued:—

"X 13" Raid, October 13th (October 14th).

Press Bureau.

"A Zeppelin raid was made yesterday evening over a portion of the London area, when a certain number of incendiary and explosive bombs were dropped.

"The material damage done is small.

"A few fires resulted, but they were quickly put out by the Fire Brigade.

"The Admiralty will issue a statement to-day when particulars are available.

"At present it is only possible to say that no public buildings were injured, and the casualties so far reported number:—

"Two women and 6 men killed and about 34 injured.

"With the exception of 1 soldier killed, all of these were civilians.

"These figures include all the casualties reported up to 11.45 p.m., Wednesday, 13th."

War Office. Later.

"A fleet of hostile airships visited the Eastern Counties and a portion of the London area last night (Wednesday night) and dropped bombs.

"Anti-aircraft guns of the Royal Field Artillery attached to the Central Force were in action. An airship was seen to heel over on its side and to drop to a lower altitude.

THE writer appointed by the Home Office to observe and describe the effect of the recent Zeppelin Raid has prepared the following account of the damage in the London area:—

"On the evening of Wednesday, October the 13th, another aerial attack was directed against London, which differed in no material respect from those made on previous occasions. The enemy's vessel or vessels flew high, at an altitude chosen, no doubt, in order to prevent as far as possible the danger of damage or destruction from anti-aircraft guns. The darkening of the Metropolitan area, together with the height at which the aircraft travelled, certainly prevented the enemy from discovering the exact position of places of importance.

"As on the last occasion, the official report issued in Berlin proves the raiders to have been grossly in error in most cases as to where they were dropping their bombs, and if we can suppose that they had really some definite objective other than the mere haphazard destruction of the lives and property of non-combatants, then, owing to the height at which they flew, they entirely failed to attain that objective.

"Except for one chance shot, the damage was exclusively on property unconnected with the conduct of the war. Of the 127 persons killed or injured none, save one or two soldiers who were in the street at the time, were combatants.

"As for the moral effect, for which, presumably, the enemy is seeking, that was all to his disadvantage. The raid occurred at an hour when practically no one except children were in bed, and, though shops in the principal shopping areas were closed, places of entertainment were full, and the masses of the population were about their ordinary evening's pleasure or business. A very much larger number of people, therefore, were aware of the enemy's presence than had been on previous occasions, but the population of London, though hundreds of thousands heard the sound of the bursting bombs and the guns, remained cool and free from panic. There were, if possible, even less signs of excitement than on previous occasions. The official warnings to take shelter were

"Five aeroplanes of the Royal Flying Corps went up, but owing to the atmospheric conditions only one aeroplane succeeded in locating an airship. This aeroplane, however, was unable to overhaul the airship before it was lost in the fog.

"Some houses were damaged and several fires started, but no serious damage was caused to military material. All fires were soon got under by the Fire Brigade.

"The following military casualties, in addition to the one announced last night, have been reported:—

"14 killed and 13 wounded."

Home Office, October 14th.

"The following are casualties other than the military casualties reported above:—

		Men.	Women.	Children.	Total.
Killed	...	27	9	5	41
Injured	...	64	30	7	101
		91	39	12	142

"Of these casualties, 32 killed and 95 injured were in the London area, and these figures include those announced last night."

German Version.

Berlin, Oct. 15th.

"Our naval airships on the night of October 13th attacked London's important establishments in the environs and the batteries at Ipswich.

"The City of London, which sustained several attacks, the London Docks, the waterworks at Hampton, near London, and Woolwich were lavishly bombarded with incendiary and explosive bombs. At all places great effects of the explosions and big fires were observed.

"In spite of vigorous counter-action, which began when the airships reached the coast, all the airships returned undamaged.—Chief of the Admiralty Staff."

better observed, and when the aircraft had passed and the guns had ceased firing most of the people who had been watching the bombardment went quietly to bed, and were undisturbed by the second raid, which took place about midnight in another part of the London area. In the theatres, from which the sounds of firing and of explosions could plainly be heard, there was a commendable absence of panic. Altogether, the imperturbability of the people of London would appear to offer a striking contrast to the behaviour of the population on the occasion of the 'rehearsals' of aircraft attacks recently said to have been held in certain German towns.

"When the results of the raid were examined next morning five distinct areas could be distinguished in which damage had been done. The first of these is an area in which there is little or no residential property, some large buildings devoted to various kinds of business, and comparatively wide streets. In this area bombs were dropped containing high explosives, which in four cases fell upon the street and in a fifth upon the back premises of one large building thronged with people. One of the bombs, which was apparently of a large size, penetrated the street into the subways containing the gas and water mains, and in exploding melted the gas pipes, setting alight a fire which, though slight in extent, lasted for several hours. The explosion of this bomb damaged the buildings round about considerably and destroyed almost all the glass in the neighbourhood. It was also responsible for a number of casualties, which will all be the subject of inquest. Those who were killed were either sitting in the front rooms of buildings or working or walking in the street.

"The second area contains a large block of residential flats, some of which are occupied as offices. Like many other blocks of flats in London, this one has a stretch of garden behind the buildings, and one of the enemy's high explosive bombs fell in the garden close to the flats themselves. One or two rooms on the ground floor were totally wrecked, and on the first floor considerable damage was done. Another bomb fell on the top of one of the buildings, demolishing the top storey. In this area there were no casualties, though several narrow escapes. One elderly gentleman

who was in the ground-floor rooms when the bombs exploded, and who was knocked over by the force of the explosion, picked himself up and made his way up the broken staircase to his bed-room on the floor above, and immediately went to bed, in spite of the fact that the glass of the windows and the shutters behind them in his bed-room had been shattered by the force of the explosion.

"The third area contains two damaged business premises, the first of them a large and modern building constructed of reinforced concrete, and with a steel and concrete roof and flooring. Two bombs dropped in this building, one of them actually on the roof and one on the pavement immediately beneath the doorway. The bomb on the pavement appears to have exploded sideways—at any rate, the damage done, which consisted chiefly of broken glass and plaster, occurred mainly in the houses on the other side of the street. The bomb which dropped on the roof of the building itself did little damage. In the same area a bomb dropped on the roof of a small hotel, the ground floor of which was occupied as an office. In this case the strength of the building, which was an old one, was not sufficient to withstand the force of the explosion, and the whole of the hotel, which consisted of three floors of the building, was entirely blown up. Fortunately in this area those indoors had been warned by the sound of previous explosions, and by taking refuge in the lower floors they escaped injury altogether. In this area, as by a curious coincidence in one other, the effect of the bombs was severely felt in a small restaurant opened in the interests of Belgian refugees.

"The fourth district in which damage was done is one consisting entirely of what may be called working class property, with small, low buildings, some of them used to house small shops or businesses, but, in most cases, occupied, and in many cases overcrowded, by private residents of the poorer classes. In this area more bombs were dropped than in those previously described and the damage done was exclusively suffered by private traders or householders, who behaved with the utmost heroism and coolness and who suffered damage, and, in some cases, loss of life, with no compensating military value for the enemy whatever. One group of small houses in this area was entirely destroyed by a single explosive bomb, and in the ruins, above which floats an evil smell of gas and drains, are to be found, torn and covered with dust, the account books and documents of some small business which up to half past nine on Wednesday night no doubt kept alive the owner and his family. In another spot in this district the bomb fell on the top of a building used for keeping dairy cattle. None of the cattle was killed, though one of them was injured. The dairyman, with presence of mind and coolness, made his way to the top storey of his house near by, in which all the windows were broken and most of the ceilings destroyed by the force of the explosion, and brought down his children to safety below. On his way downstairs on the last journey a further explosion blew him backwards on to the floor of

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The Defence of London.

In the House of Commons on Tuesday several questions were asked as to whether the aeroplanes which had been on duty for the defence of London received orders to demobilise at 6 p.m. on Wednesday, October 13th, a few hours before the Zeppelin raid; whether any other aeroplanes had received orders to take their place; and whether, at the time of the arrival of the Zeppelins, any and, if so, how many aeroplanes were aloft? Mr. Tennant, who replied, said that questions relating to aeroplanes on duty for the defence of London should be addressed to the Admiralty. The aeroplanes under military control, which were held in readiness to attack hostile aircraft, were not ordered to demobilise at 6 p.m. on Wednesday, October 13th. The second part of the question did not, therefore, arise. The reply to the last part was in the affirmative. During the time the Zeppelins were over England, five military aeroplanes ascended. Of these three were in the air at the same time, and he believed three were over London.

Precautions Against Air Raids.

REPLYING to questions by Mr. Annan Bryce as to whether all lights on bridges should be ordered to be extinguished when a Zeppelin attack was expected, Mr. Brace said that the present arrangements have been settled on the advice of expert officers of the Admiralty. If further observations show that any improvement is possible, the arrangements will be modified accordingly. The lights in tram-cars are now extinguished when crossing the bridges, or so shaded as to be practically invisible.

In regard to complaints as to blinds not being drawn in railway carriages on the Woolwich section of the S.E. and C.R., Mr. Brace said that steps were now being taken on this and other lines in the London area to post fresh notices in more imperative terms, drawing attention to the penalties for non-compliance with the order, and the company's servants will have instructions to see that the order is complied with.

one of the rooms, but he succeeded in bringing all his family out unharmed. After the aircraft had passed they returned to their rooms until they were awakened again by the sound of guns about midnight.

"In the last area covered by the raid (this time in a suburb) there is not a single factory or business house, and hardly any shops. There are no military encampments, no store sheds, no aerial defences, and not even searchlights. All the property consists of detached or semi-detached houses surrounded by small gardens. It was in this district that, for some obscure reason, the largest number of bombs were dropped, and they must have been launched by what the commander of the Zeppelin, in his interview on the last raid, described as 'rapid fire.' The actual period of bombardment did not last a minute, and the distance from the spot where the first bomb dropped to the last could not have been more than six hundred yards. Within sixty yards no less than five fell together, while, near by, three fell in a single garden which did not measure more than thirty yards square. A striking and fortunate feature of the bombardment in this district, and, indeed of the whole attack on this occasion, is the number of cases in which the bombs dropped not on buildings but on the ground. In only three cases in this suburban area were houses actually struck, though, of course, the force of the explosion was sufficient to destroy whole houses, even at a considerable distance.

"Here there were many astonishing escapes. In one instance a bomb fell on a narrow passage separating two houses, the entire fronts of which were blown out, causing the upper bedroom floors to collapse. In one of the upper bedrooms a mother and daughter were sleeping. They were thrown out on to the street through the place where the ground floor window should have been, both escaping with their lives. In the next house a little boy lying in his cot was buried under the debris of the wrecked roof of the house, and, in order to release him, the whole roof had to be lifted up, so securely was the cot pinned down. There was not a stick of furniture nor a piece of china left whole in either of these two houses—only two small pictures remained with the glass unbroken. A large house a few yards away suffered very badly. The bomb fell right on the centre of it, killing instantly two children and severely injuring a third child and the father and mother. In the road in which this occurred twenty houses are without doors or windows, and every house is heavily pitted with shot marks. In one of the houses, where a woman was sitting on a sofa, the door of the room was forced open with such violence that the lock was wrenched from its fastening and struck the wall within a few inches from the woman's head. At another point, where a bomb fell in the street, a young man was saying 'good night' to a woman at the front door of the house. He was immediately killed by a fragment of the bomb, and the woman was severely injured. At this point also an old man, who was walking on the pavement, had his arm blown off and died in hospital shortly afterwards."

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Protection of National Treasures.

A QUESTION was put in the House of Commons as to whether the Government had been in communication with the authorities of Westminster Abbey, St. Paul's Cathedral, National Gallery, British Museum, and other buildings, &c., of national importance. Mr. Asquith in a written reply stated "it would be manifestly impossible to take steps which would afford complete protection against enemy aircraft to individual buildings such as those named, but the Office of Works has taken steps in consultation with the trustees of museums to give some measure of protection, as also to some of the large public buildings. It is hoped, however, that the service presided over by Sir Percy Scott will deal effectively with any further attempts at indiscriminate destruction of property. I do not think that any useful purpose would be served by the setting up of a committee such as suggested in the question."

R.F.C. and Reprisals.

In the Commons on Wednesday Mr. Tennant, replying to Mr. Joynson-Hicks, said that the policy of reprisals was always one open to controversy. The Royal Flying Corps was a military organisation, and was engaged on military operations. Dastardly raids by the enemy on undefended towns and defenceless people should not be allowed to divert the energies of this fighting force from its primary military duties.

Air Raid Reprisals and a separate Air Service.

A LARGELY attended meeting, organised by the *Globe* newspaper, was held at the Cannon Street Hotel, on the 14th inst., "to urge upon the Government a declared policy of air reprisals for Zeppelin raids on London and other open cities." Lord Willoughby de Broke presided, and the speakers included Mr. Joynson-Hicks, M.P., Mr. E. Jardine, M.P., Mr. Charles Palmer, and Sir George Makgill. Two resolutions were passed, one demanding a formal Government announcement of a systematic policy of reprisal raids on German cities, and the other urging the formation of a separate Air Ministry working on lines similar to that of the Admiralty.

THE BRITISH AIR SERVICES.

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

THE following appeared among the Admiralty announcements of the 13th inst. :—

D. Walker entered as Lieutenant, R.N.V.R., temporary, and appointed to "President II," additional, for R.N.A.S.; to date Oct. 12th. C. More and E. Fitzberbert entered as Sub-Lieutenants, R.N.V.R., temporary, and appointed to "President II," additional, for R.N.A.S.; to date Oct. 12th. E. Hickman entered as Temporary Warrant Officer, 2nd Grade, and appointed to "President," additional, for R.N.A.S.; to date Oct. 12th.

The following appeared among the Admiralty announcements of the 14th inst. :—

R. Davies entered as Probationary Flight Sub-Lieutenant, for temporary service, with seniority of Oct. 13th.

The following appeared among the Admiralty announcements of the 15th inst. :—

Flight Sub-Lieut. R. Souray to the "Riviera." Oct. 14th.

I. G. Kelly entered as Probationary Flight Sub-Lieutenant, temporary, with seniority of Oct. 14th, and appointed to "President II," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of the 18th inst. :—

Flight-Commander.—H. A. Williamson to "President," additional, for duty at the Air Department, Admiralty, temporary. July 19th.

Royal Flying Corps (Military Wing).

THE following appeared in a supplement to the *London Gazette* issued on the 13th inst. :—

Flying Officer.—Lieut. Ewames W. H. Scotland, Unattached List, New Zealand Military Forces. Aug. 27th, 1915.

Memoranda.—Capt. A. E. Lewis, South African Defence Forces, to be Temporary Second Lieutenant, for duty with the Royal Flying Corps. Oct. 1st, 1915.

Supplementary to Regular Corps.—Second Lieutenants (on probation) confirmed in their rank: George S. Sansom and Basil H. Radford.

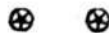
The following appeared in a supplement to the *London Gazette* issued on the 14th inst. :—

Supplementary to Regular Corps.—Second Lieutenants (on probation) confirmed in their rank: Bernard W. J. H. Martin and Cedric W. Hill.

To be Second Lieutenants (on probation): Sept. 20th, 1915: Alfred W. Cott, George D. Hannay, Stanley S. Nevill; Sept. 22nd, 1915. Victor F. P. Bryce; Sept. 23rd, 1915. William F. Rogers; Oct. 15th, 1915.

The following appeared in the *London Gazette* of the 15th inst. :—

Flying Officers.—Sept. 28th, 1915: Capt. A. K. H. O'Brien, Special Reserve, 2nd Dragoon Guards (Queen's Bays). Lieut. K. B. Harbord, R.A., and to be seconded. Lieut. R. Egerton, Princess Victoria's (Royal Irish Fusiliers), and to be seconded. Temporary Lieut. M. Henderson, Seaforth Highlanders (Ross-shire Buffs, Duke of Albany's), T.F. Temporary Second Lieut. R. P. Romer, Royal Dublin Fusiliers, and to be transferred to the General List. Second Lieut. R. S. Lucy, Worcestershire Regt., T.F. Temporary Second Lieut. C. Danby, Rifle Brigade (Prince Consort's Own), and to be transferred to the General List. Temporary Second Lieut. C. W. Palmer, Leicestershire Regt., and to be transferred to the General List. Second Lieut. N. Howarth, King's Own (Royal Lancaster Regt.), Special Reserve, and to be seconded. Second Lieut. B. W. J. H. Martin, Special Reserve.

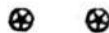


Bombs on Switzerland.

THE following French official communication was received at the Press Bureau on the 19th inst.:

"A German aviator not only flew over Switzerland, following the example of the Zeppelins that flew over Holland, but on Sunday last, between three and four p.m., actually bombed two Swiss towns, La Chaux de Fonds and Ronan. Four persons, of whom one was a child, were slightly wounded.

"Up to the present time no less than twenty violations of Swiss territory by German aviators have been chronicled."



Second Lieut. C. W. Hill, Special Reserve. Second Lieut. H. G. Salmond, Special Reserve.

Supplementary to Regular Corps.—Second Lieut. (on probation) Hubert G. Salmond is confirmed in his rank.

To be Second Lieutenants (on probation): A. C. Gilling; Sept. 5th, 1915. Maurice Hodge; Sept. 27th, 1915.

The following appeared in a supplement to the *London Gazette* issued on the 16th inst. :—

Temporary appointments at the War Office:

Staff Lieutenants.—The appointments of Qrmr. and Hon. Lieut. Walter J. D. Pryce, Royal Flying Corps, Military Wing, and Second Lieut. Noel C. F. Francis, R.F.A., T.F., notified in the *Gazette* of Oct. 9th, 1915, are postdated to Sept. 21st, 1915.

Flying Officers.—Sept. 9th, 1915: Major B. F. V. Harcourt, Welsh Regt.; Temporary Lieut. G. D. Gardner, Alexandra, Princess of Wales's Own (Yorkshire Regt.), T.F.; Temporary Second Lieut. C. B. Cooke, R.A., and to be transferred to the General List; Temporary Second Lieut. N. A. Bolton, R.A., and to be transferred to the General List; Second Lieut. J. C. Slessor, Special Reserve.

Supplementary to Regular Corps.—To be Second Lieutenants (on probation): Francis G. M. Williams; Sept. 15th, 1915. Sidney Ransom; Oct. 11th, 1915.

The following appeared in a supplement to the *London Gazette* issued on the 18th inst. :—

Assistant Equipment Officers.—Second Lieut. L. A. McDougald, Special Reserve; Sept. 1st, 1915. Temporary Second Lieut. L. da C. Brawne-Lindon, 9th Reserve Regt. of Cavalry, and is transferred to the General List; Sept. 7th, 1915. Temporary Lieut. W. W. Tullis, Norfolk Regt., and is transferred to the General List; Sept. 13th, 1915. Second Lieut. H. S. Ebben, Special Reserve; Sept. 14th, 1915. Temporary Second Lieut. H. J. Murphy, Cheshire Regt., and is transferred to the General List; Sept. 17th, 1915. Second Lieut. H. B. T. Childs, Special Reserve; Sept. 24th, 1915. Second Lieut. C. F. Pittman, Special Reserve; Sept. 25th, 1915.

Supplementary to Regular Corps.—The appointment of Victor M. Wenner to a Second Lieutenantcy, which appeared in the *Gazette* of Oct. 6th, 1915, is cancelled as from Oct. 13th, 1915.

The following appeared in the *London Gazette* of the 19th inst. :—

Flying Officers.—Aug. 20th, 1915: Capt. C. R. S. Bradley, 4th Cavalry, Indian Army; Capt. L. Wanless-O'Gowan, Cameronians (Scottish Rifles), and to be seconded; Temporary Second Lieut. S. Haywood, East Lancashire Regt., and to be transferred to the General List; Temporary Lieut. R. H. H. Le Brasseur, R.A., and to be transferred to the General List; Second Lieut. C. E. H. Medhurst, Royal Inniskilling Fusiliers, and to be seconded. Sept. 8th, 1915: Lieut. P. C. Maltby, Royal Welsh Fusiliers, and to be seconded; Capt. L. Jenkins, Dorsetshire R.G.A., T.F.; Temporary Lieut. A. M. Wilkinson, Hampshire Regt., T.F. Second Lieut. D. W. Grinnell-Milne, Royal Fusiliers (City of London Regt.), Special Reserve, and to be seconded; Sept. 9th, 1915. Temporary Lieut. H. B. R. Rowell, R.E., T.F.; Sept. 17th, 1915. Sept. 23rd, 1915: Lieut. S. H. B. Harris, Special Reserve, from an Assistant Equipment Officer; Second Lieut. A. C. Wilson, 12th (Prince of Wales's Royal) Lancers, and to be seconded. Oct. 2nd, 1915: Lieut. W. K. Campbell, Canadian A.S.C.; Temporary Second Lieut. S. E. Parker, York and Lancaster Regt., and to be transferred to the General List; Second Lieut. R. B. Jenkins, South Wales Borderers, and to be seconded.

Supplementary to Regular Corps.—Second Lieut. Leonard W. Learmount to be Lieutenant; Sept. 30th, 1915. Second Lieutenants (on probation) confirmed in their rank: Leslie A. McDougald, Harold B. T. Childs, Cecil F. Pittman, Henry S. Ebben. To be Second Lieutenants (on probation): Hugh A. B. Robb; Sept. 4th, 1915. James W. Gordon; Sept. 11th, 1915. Arnold Hunt; Sept. 25th, 1915. Guy L. Godden; Sept. 28th, 1915. Percival R. Burchall; Oct. 3rd, 1915.



Double R.F.C. Fatality in Scotland.

IT is with the greatest regret that we have to record that two officers of the R.F.C. lost their lives in an accident near Forfar on the 14th inst. It appears that on the 13th they had flown from Montrose, and had to descend near Glamis Castle. After a new propeller had been fitted the next morning they started to return, but they were soon seen to be in difficulties, and after circling once or twice the machine crashed to the ground. Both the pilot (Lieut. Allan Hardy) and the passenger (Capt. F. G. A. Arkwright) were instantly killed.

CONSTRUCTIONAL DETAILS.—VII.

IN preceding instalments of our series of constructional details, we have dealt with such component parts as go to the making up of the wings and body of an aeroplane, and have illustrated the various fittings by means of which these parts are joined together. These details have not pretended to lay any claim to completeness, but have been meant as an indication of how some of the constructional problems that confront the aeroplane designer may be, and, indeed, have been, solved. Their object has been that of giving readers of "FLIGHT" a general idea of constructional methods, while at the same time furnishing a comparative summary which may stimulate designers, by putting before them a variety of ways of obtaining the same end, to continue along original lines. Although the main object of an aeroplane is that of flying, and hence its aerodynamic qualities necessarily the first consideration, the fact that before taking the air the machine has to rise from the ground and alight on it again after a flight, renders the question of undercarriage hardly less important. It is obvious that the most efficient—from an aerodynamical point of view—machine ever designed would be useless if its chassis did not enable it to leave the ground and to return to it again safely. We therefore intend, in the present and some subsequent issues, to deal with the question of undercarriages.

Since the initial run of an aeroplane along the ground before it attains sufficient velocity to enable its wings to lift the weight never, or hardly ever, takes place over a perfectly smooth surface, it becomes advisable to provide the wheels on which it is running with some form of elastic suspension, while for alighting purposes a flexible mounting of the wheels becomes an absolute necessity. There are in use at the present day three forms of elastic suspension of the alighting gear from the rigid portion of the undercarriage, *i.e.*, rubber shock absorbers, leaf springs, and coil springs. Of these three forms the rubber is by far the more commonly used. The reason for this is partly that good vulcanised rubber, whether it be in the shape of rings of rectangular section or lengths made up into a circular section of numerous strands, will absorb far greater energy than will steel. Secondly, although rubber deteriorates somewhat rapidly, signs of fatigue are easily and unmistakably evident even to the inexperienced. For use on very heavy machines the two other forms of elastic suspension mentioned are frequently employed, but not to such a large extent as the rubber shock absorber.

Irrespective of the methods of elastic suspension employed, undercarriages differ as regards the members that support the wheels and their suspension, and whose function it is to raise the machine sufficiently off the ground to provide the necessary clearance for the propeller. In this respect the trend of development is undoubtedly towards greater simplicity, at any rate as regards light and semi-heavy machines. A problem which, in the early days, was considered one of some importance was that of providing a form of pivoting of the wheels that would allow of landing a machine with safety in a cross wind. As, however, pilots became more experienced, it was found that orientable wheels could be dispensed with, and the saving in weight and head resistance thus effected could be turned to better advantage in other directions.

In compiling the various types of undercarriages we have been somewhat in doubt as to the best method of classification. Apart from the form of flexible suspension employed, the other alternative is that of grouping them according to the number, presence or absence of skids, and this is the procedure that we have decided to adopt.

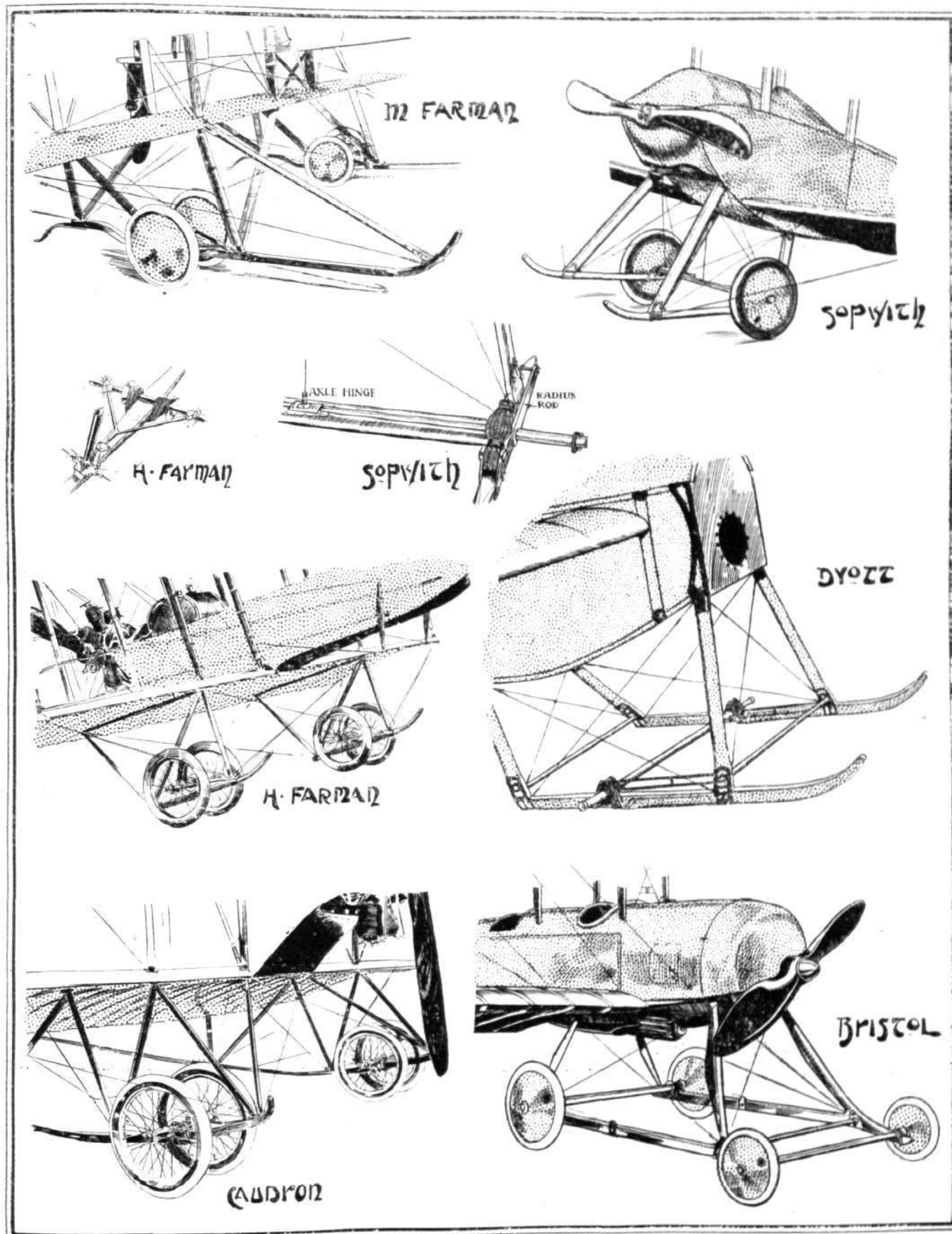
As the Farman type of undercarriage may be said to be the progenitor of the wheel and skid combination, this will be dealt with first. The accompanying illustrations show a modern Henry and Maurice Farman chassis. The chief characteristics are, it will be seen, that there are two pairs of wheels, each pair mounted on a short axle slung from the corresponding skid by means of rubber bands. The skids or runners are in turn supported on a structure of streamline struts running down from the spars of the lower wing. This arrangement, while suffering from the disadvantage that shock is transmitted to the spars, gives a very wide track, and consequently good stability when rolling over the surface.

The disadvantage of the arrangement is not very serious, and can be almost completely overcome by proper bracing with steel wires or cables. Another form of double skid undercarriage is shown in the sketch illustrating the Caudron chassis. Here, as in the Farman, the skids are supported on struts running up to the lower wing, but the skids are extended right back to the tail, and form, in fact, the lower booms of the outrigger carrying the tail planes. An excellent retarding effect when landing is one of the immediate results obtained by these long skids, and the Caudrons probably pull up more quickly than any other machine of similar weight and area.

Confining ourselves to these three examples of undercarriage in which the skid struts are joined to the spars of the lower wing, the next three illustrations show a type which, although being similar to the Farman in that it has two skids, differs in several details. The chassis struts, it will be seen, are not secured to the lower wing but to the body of the machine, and the overall width of the track is considerably less than in the Farman and Caudron types. The two examples given of the single axle and single-pairs-of-wheels form of undercarriage are similar in type and differ in detail construction only. In the Dyott monoplane the axle runs right across from skid to skid, while in the Sopwith Scout the stub axles are pivoted in the centre, half way between the skids, and move up and down between two transverse members. Bracing of the front portion of the undercarriage is effected in the Dyott machine by a transverse compression member and diagonal cross-bracing, while in the Sopwith there is no such transverse member in front, its place being taken by cables running outwards from the skids to the main planes.

Yet another form of undercarriage having double skids is shown in the sketch of the Coanda-Bristol biplane. Here the two skids are carried in the usual way on four struts coming down from the body, and a single axle carries the two main alighting wheels. There is, however, another pair of smaller wheels mounted on an axle slung by rubber bands from a forward projection of the skids. The purpose of these front wheels is, of course, to prevent the machine from turning up on its nose when landing on rough ground.

CONSTRUCTIONAL DETAILS.—VII.



Various types of double skid undercarriages. (For letterpress see page 804.)

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Aviators' Certificates.

THE following Aviators' Certificates have been granted:—

- 1849 Flight Sub-Lieut. Cecil Roy Terraneau, R.N.A.S. (Maurice Farman Biplane, Central Flying School, Upavon). Aug. 19th, 1915.
- 1850 E. R. Grange (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 20th, 1915.
- 1851 Cyril Day (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 23rd, 1915.
- 1852 Cyril George Hewson (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 23rd, 1915.
- 1853 L. E. Smith (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 30th, 1915.
- 1854 Thomas Webber (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 30th, 1915.
- 1855 G. E. Hervey (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 30th, 1915.
- 1856 J. Robinson (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 30th, 1915.
- 1857 M. Van Allen (Curtiss Biplane, Curtiss School, Toronto, Canada). Sept. 30th, 1915.
- 1858 A. O. Brissenden (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 3rd, 1915.
- 1859 R. J. McDougall (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 3rd, 1915.
- 1860 George Thom (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 3rd, 1915.
- 1861 Robert K. Shives (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 3rd, 1915.
- 1862 A. W. Kilgour (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 4th, 1915.
- 1863 Arthur Goulding (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 6th, 1915.
- 1864 A. B. Shearer (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 6th, 1915.
- 1865 L. W. Nurse (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 6th, 1915.
- 1866 D. Whittier (Curtiss Biplane, Curtiss School, Toronto, Canada). Oct. 6th, 1915.
- 1867 Lieut. Clifford John Hart (5th Worcestershire Regt.) (Maurice Farman Biplane, Military School, Shoreham). Oct. 6th, 1915.
- 1868 Philip Edwin Bayley (Hall Biplane, Hall School, Hendon). Oct. 7th, 1915.
- 1869 André de Meulemeester (Belgian Subject) (Grahame-White Biplane, Grahame-White School, Hendon). Oct. 8th, 1915.
- 1870 2nd Lieut. Reginald Clive Gallop (2nd Scottish Rifles) (Caudron Biplane, Ruffy-Baumann School, Hendon). Oct. 10th, 1915.
- 1871 Ronald True (Maurice Farman Biplane, Military School, Brooklands). Oct. 10th, 1915.
- 1872 Lieut. Gordon Roy Elliott (3rd Dragoon Guards) (Maurice Farman Biplane, British Flying School, Le Crotoy, France). Oct. 11th, 1915.
- 1873 Lieut. Thomas Laurence Purdom (Scottish Borderers) (Maurice Farman Biplane, Military School, Birmingham). Oct. 11th, 1915.
- 1874 Georges Medaets (Belgian Subject) (L. and P. Biplane, London and Provincial School, Hendon). Oct. 12th, 1915.
- 1875 Flight Sub-Lieut. Clifford Wilfred Elliott, R.N.A.S. (Caudron Biplane, Royal Naval Flying School, Eastchurch). Aug. 29th, 1915.
- 1876 Flight Sub-Lieut. Michael Birkbeck, R.N.A.S. (Maurice Farman Biplane, Royal Naval Flying School, Eastchurch). Aug. 31st, 1915.
- 1877 Flight Sub-Lieut. Norman Gregory, R.N.A.S. (Caudron Biplane, Royal Naval Flying School, Eastchurch). Sept. 7th, 1915.
- 1878 Flight Sub-Lieut. Henry Vernon Worrall, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Eastbourne). Sept. 30th, 1915.
- 1879 John Henry Duncan Montgomery Campbell (Grahame-White Biplane, Royal Naval Air Station, Eastbourne). Sept. 30th, 1915.
- 1880 Flight Sub-Lieut. Sidney Arthur Black, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Eastbourne). Oct. 11th, 1915.
- 1881 Flight Sub-Lieut. Harold L'Estrange Tyndale Biscoe, R.N.A.S. (Grahame-White Biplane, Grahame-White School, Hendon). Oct. 13th, 1915.
- 1882 Lieut. Burpee Macleod Hay (Canadian Engineers) (Maurice Farman Biplane, Military School, Norwich). Oct. 13th, 1915.
- 1883 Kenneth Walter Round (Maurice Farman Biplane, Military School, Brooklands). Oct. 13th, 1915.
- 1884 Flight Sub-Lieut. Francis Donald Holden Bremner, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Oct. 13th, 1915.
- 1885 Thomas Jones (Beatty-Wright Biplane, Beatty School, Hendon). Oct. 13th, 1915.
- 1886 Flight Sub-Lieut. Kenneth Victor Hooper, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Oct. 13th, 1915.
- 1887 James McKinlay Hargreaves (Maurice Farman Biplane, British Flying School, Le Crotoy, France). Oct. 13th, 1915.
- 1888 2nd Lieut. Lewis Wigham Hall (Border Regt.) (Maurice Farman Biplane, Military School, Farnborough). Oct. 13th, 1915.
- 1889 2nd Lieut. Thomas Eaton Lander (3rd Highland Light Infantry) (L. and P. Biplane, London and Provincial School, Hendon). Oct. 14th, 1915.
- 1890 2nd Lieut. Eric Tom Farrow (Middlesex Regt.) (L. and P. Biplane, London and Provincial School, Hendon). Oct. 16th, 1915.
- 1891 Flight Sub-Lieut. Charles Leonard Elliot Geach, R.N.A.S. (Maurice Farman Biplane, Royal Naval Air Station, Chingford). Oct. 16th, 1915.

Extension of the Hours of Opening the Club.

The Club is now open from 9 a.m. to 10.30 p.m. each day, including Sunday.

New Members.

Members are reminded that, according to the Rules, the Annual Subscription of any New Member they may propose, who is elected between November 1st and December 31st of this year, will cover the period up to December 31st, 1916.

THE FLYING SERVICES FUND

administered by

THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

Subscriptions.

	£	s.	d.
Total subscriptions received to Oct. 13th, 1915...	9,785	14	11
William Beardmore and Co., Ltd. ...	100	0	0
Collected at the Westland Aircraft Works, Yeovil (Fifth contribution) ...	0	10	3
Total, October 20th, 1915 ...	9,886	5	2

166, Piccadilly, W. B. STEVENSON, Assistant Secretary.



RHETORIC is with me an unlearned art ; I am no rhetorician. Do I try to write rhetorically, my thoughts refuse to think, I become involved, I come to loose ends, I flounder.

Never was man so wilfully unlearned in flowery language. Mid-Victorian by date of entry, I was born when rhetoric was making one of its bold stands for favour. Scarce did my baby lips become moistened by other than mother-food than I was taught to call a rake a garden implement, though even at that date the hoardings were asking for a spade to be called a spade.

I am of the plain men, and so that I write good plain English, understandable to good plain English men and women, I am content.

Though I am not of a temperament poetic, whose knights supposedly exist on rhetoric, having neither long hair nor a flowing tie, yet do I, in my small way, occasionally feast me right royally on the beauties of nature, allowing my imagination for what it is worth to transport me whither it will into the realms of poetry.

To me, moonlight is poetic ; it changeth the face of nature. Not that nature, glorious as she is, needeth changing, but to plain men, having eyes and no eyes, seeing and not seeing, something is needed at times to bring her glories under notice, to present facts in a new light.

Walk with me in my beautiful forest of Epping, when the moon is at the full, and in my company shall you be transported to Fairyland. Linger with me a few moments in Monks Woods midst the mighty beeches, where the myriad wild-flowers lend their perfume to excite the senses, and you shall see at a little distance, where the silver-birches stand round in sentinel array, the pearly sheen of the gossamer wings where the fairies dance their fantastic circle in the moonbeams. Stand with me on the hill-top, where the obelisk to Queen Boadicea casts its shadow sundial-wise at our feet, and gaze out over the hills and vales of Middlesex and Hertfordshire ; over London and to St. Paul's dome, yea, even to the Crystal Palace, itself become beautiful in the moonlight, and you shall guess at Fairyland : seest thou ever anything more beautiful ? But write it down a moonlight night.

Do I try to think of it as Fair Luna shedding her silvery beams athwart the azure sky, I think only that the Zeppelins will not come to-night, and the fair expanse changes from Fairyland to a place on which to drop hellish Hun bombs, killing women and innocent children.

I have no quarrel with rhetoric, even though it be not of my understanding, yet have I a grievance.

For the last word in the last line of my last "Reflections" I wrote "Mother." Somewhere between the upper end of the blue pencil, and the machine-minder, it became changed into "Revered Maternal Parent." It did not greatly matter. It was a skittish article, pretending nothing, carrying no great thought.

Perhaps the power with authority to alter and mutilate, alter and improve, thought of "Mother" as I should have thought of it—as a word too sacred to be used

lightly. But had I so thought, I would not have sought subterfuge ; I would have deleted the whole sentence ; I could not substitute for mother.

Revered Maternal Parent savours, to me, something of household possession. No auctioneer (rhetoric would have it "Official Valuer"), when my poor belongings are ranged on the lawn for non-payment of the super-tax, shall ever cry "Lot 54. One Revered Maternal Parent, in good preservation."

Reader. You have borne with me thus far. You have tried to gather whither I wish to lead you : what is it all about ?

I have tried your patience to the uttermost, your interest is beginning to flag, yet must I endeavour to hold you to the end. I must throw you a sop. I must whet your appetite and tickle your palate, so that of sheer curiosity you shall continue to read ; here then is my *Hors d'œuvre*.

The last word on this page shall be written rhetorically, though I had much rather write plainly.

Nay ! I pray you look not at the word prematurely, else is all that follows superfluous.

Art thou a woman my pleadings shall probably be all in vain. Thou wert ever prone to touch the paint to ascertain for thine own assurance whether it be really wet ; yea, even from the earliest. But bear with me a short while, and I shall try to save even thee from thine own curiosity. I shall give thee other similar word ; I shall set thee riddles ; thou wert ever fond of riddles even as thou art thyself the Queen thereof.

The word I would use were I left to my own unpoetic devices is not a delicate word. Used as an adjective governing the nouns wood, or fruit, or other, it is but barely passable. To use it as I would use it, wrongly, it is a slang term. Yet, had I my way ; were there no blue pencil ; did I not know that certainly it should never see the light of day in cold type, I would use it, though the sanctum sanctorum fall about my ears.

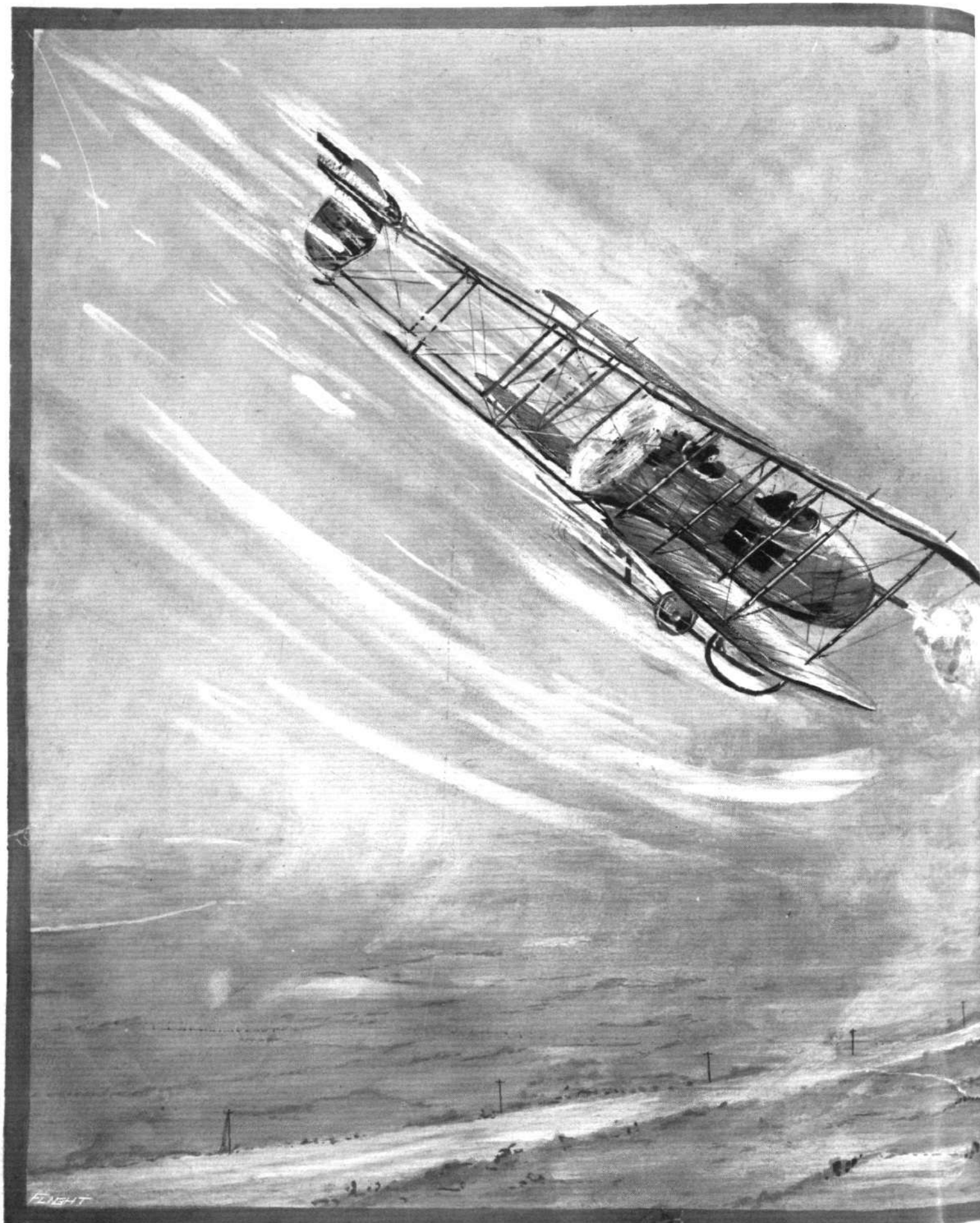
But your patience is at an end. You can wait no longer. Even you, mere man, have already taken a sly glance at that last word, and have gone back to read the few remaining ; few, because having approached so closely, it is hardly within the possibilities of human nature not to peep. Therefore I might even finish now and spare my cares in writing words which shall be never read.

I think the shooting of our anti-aircraft gunners, on the night of the Zeppelin raid was—UNFORTUNATE.



German Air Raid Rehearsals.

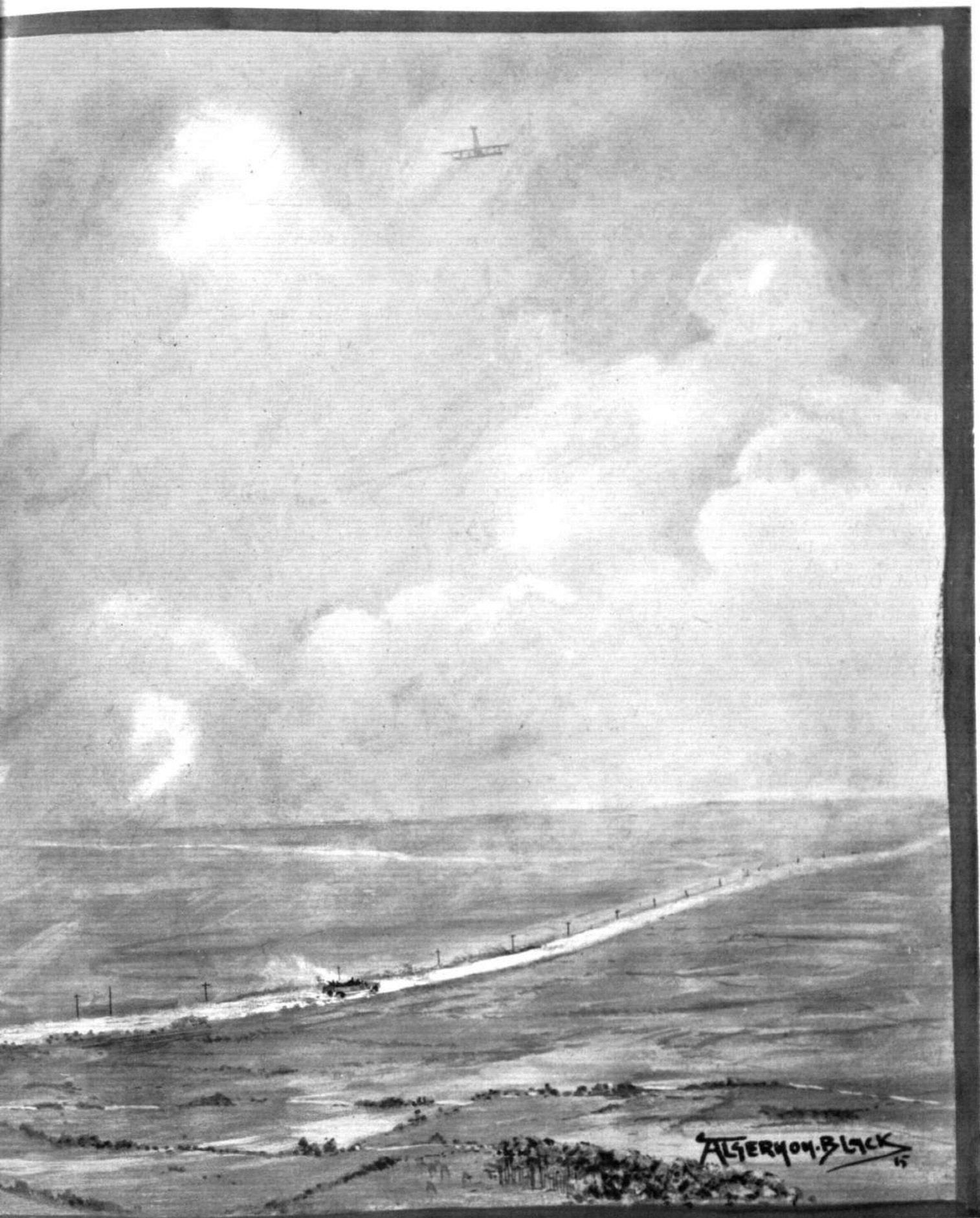
ACCORDING to the German papers, rehearsals arranged to test the arrangements made in Bremen, Kiel, Dantzig, Hamburg, and other German towns, to protect the public did not have the effect intended. For weeks the public have been instructed what to do, but when the alarms went off people flew panic-stricken into the streets, congregated in various places, or rushed to the military headquarters for protection. The newspapers warn the public to show greater self-possession on the next occasion.



AEROPLANE VERSUS MOTOR CAR: STORIES FROM "OVER THERE."—"During their recent rec-
 noticed the frequent passage of a very fast enemy motor car, which covered great distances, and which was always
 vehicle was being used for some important despatch work. One of the aviators, who had on more than one occas-
 One morning, when flying at a considerable height in company with another machine, he noticed the car in the d-
 distance, he suddenly and unexpectedly made a steep and swift dive straight at the vehicle. When within very c-
 moment, the pilot of the aeroplane forced the nose of his machine up, and commenced to rise swiftly. As the aer-
 hit, apparently fatally, and that the machine, out of control, had mounted the bank at the side of the road and turn-
 briefest space of time they were so close to the car as to distinguish clearly the actions of its occupants, one of wh-
 that he thought for an instant that the machine

OCTOBER 22, 1915.

FLIGHT



saissance work over and behind the German lines, in the neighbourhood of Nieuport and Bruges, British aviators
ven at great speed. From the manner in which other traffic gave place to this car, it was deduced that the
unsuccessfully attempted to disable the car with bombs, made up his mind to destroy it in some way or another.
nce. He turned his machine until he was travelling in the same direction, and, carefully judging the speed and
e range of it his observer opened a hot machine-gun fire at the occupants of the car, until, at the last possible
ne soared again into the sky in great circles, the occupants were able to see that the driver of the car had been
completely over into an adjacent field. Speaking of the incident afterwards, the British pilot said that for the
was making an ineffectual attempt to drive off his attackers. The pilot of the aeroplane cut his distance so fine
ould hit the ground."—(Special Correspondent.)

FROM THE BRITISH FLYING GROUNDS.



London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—Instructors during last week: Messrs. Manton, Pashley, Russell, and Winter. Straights with instructor: Probationary Flight Sub-Lieuts. Aplin, Davenport, Gammon, Graham, Moody, and Ovens. Straights alone: Probationary Flight Sub-Lieut. Cross. Circuits with instructor: Prob. Flight Sub-Lieuts. Man, Sadler, and Till. Figure of eight alone: Probationary Flight Sub-Lieuts. Davies, and Hackman.

Certificates during week: Probationary Flight Sub-Lieuts. Biscoe, and James.

Grahame-White Civilian School.—Straights with instructor: Messrs. Franke, Mansel-Howe, Horridge, McConnell, and Jones. Straights alone: Mr. Fraser.

Brevet: Mr. Ellis.

Beatty School.—Pupils out during last week:—Messrs. Baldwin (15 mins.), Bond (30), Byrne (10), Baker (30), Begg (60), Brown (20), Brynildsen (30), Campbell (20), Collett (16), Collier (40), Cowper (36), Cumming (20), Davison (10), Delves (25), Duffus (31), Fawcett (16), Fellowes (30), FitzHerbert (75), Fox (5), Gayner (22), Hodgson (55), L. F. Jones (25), T. Jones (15), Kirkwood (20), Lashmar (28), Mellings (21), Murdoch (10), Nash (24), Nicholson (27), Onley (10), Owen (40), Patterson (10), Podmore (20), Schollaert (10), Smith (25), Stagg (29), Symington (5), Willmet (30), and Whincup (15).

The instructors were Messrs. G. W. Beatty, W. Roche-Kelley, R. W. Kenworthy, G. Virgilio, A. E. Mitchell, and L. L. King, the machines in use being Beatty-Wright dual-control and single seater propeller biplanes and Caudron tractor biplanes.

An excellent ticket was taken on the 13th by Mr. T. Jones.

Exhibition flights were given on Thursday, Saturday, and Sunday.

Hall School.—During the past week the following pupils received instructions:—With H. F. Stevens: Messrs. B. G. Watson and A. de Brandon, both doing figures of eight and right and left-hand turns, and practising *vol plané* landings, previously to qualifying for their *brevets*. With C. M. Hill: Messrs. Seward, F. Hall, Stirling, Broad, Hamer, Nicolle, Bangs, Wilkins, Butterworth, Punnet, Cook, and Drew, all doing straight flights and circuits. With Charles Bell: Messrs. Manley, Dodds, Evans, Shum, Nicolle, Lake, Woolley, Rattray, Bond, Cumberbirch, Lieut. Bell, Messrs. Mann, Dresser, and Redford, all doing rolling practice and straight flights.

During the week Messrs. B. G. Watson (an Australian of the Sopwith Aviation Co.) and A. de Brandon (also of Australia) both flew the tests for the Royal Aero Club certificate, which they obtained in excellent style. Messrs. Broad, Bangs, and Hamer are now ready to qualify for their certificates. Machines in use: Hall tractor (Government type) biplanes.

London and Provincial Aviation Co.—Pupils doing rolling last week: Messrs. Law, H. Roberts, J. Roberts, Dawson, Lockett, Lees, Lambert, Thorpe, Hardy, Burton, Woods, Jackson, Hunt, and Jones. Doing straights: Messrs. Lewis, Jowett, Little, Renton, and W. Warren, jun. Circuits and eights: Messrs. Northrop, Lander, Farrow, and Medaets.

Instructors: Messrs. M. G. Smiles, W. T. Warren, and C. M. Jacques.



A GROUP OF PUPILS WHO HAVE SECURED THEIR TICKETS AT HENDON AERODROME.—1. Mr. Percy W. Chambers (Ruffy-Baumann School). 2. Mr. W. O. Russell (Hall School). 3. Mr. V. M. Wenner (Hall School). 4. Mr. A. E. Hatchman (Hall School). 5. Mr. A. T. Watson (Hall School). 6. Mr. W. Huggan (Hall School).

Royal Aero Club certificates have been taken this week by Lieut. Lander, Lieut. Farrow, and Monsieur G. Medaets.

Ruffy-Baumann School.—Pupils with instructor last week: Brand (18 mins.), Cole (40), De Grauw (24), Vernon (16), Coppens (24), Cuthbertson (24), Coppens (24), Johnson (8), Sherwood (32), and Griffiths (24). Straights: Lieuts. Prothero, Ball, and Messrs. Bailey (33 mins.), May (34), Stewart (44), Sherwood (16), Cole (12), and De Grauw (12). Eights and circuits: Prothero (20 mins.) and Ball (29).

Certificates: Capt. Fairbairn Crawford, Lieuts. Prothero and Ball.

Instructors: Edouard Baumann, Felix Ruffy, Ami Baumann, and Clarence Winchester.

Northern Aircraft Co., Ltd.

The Seaplane School, Windermere.—With instructor: Coats (11 mins.), Jeffreys (14), Ivybom (15), and Lieut. Manning (12). With instructor as passenger: Ridgway (19 mins.), Inglis (19), Robertson (23), and Macintyre (6). Instructors last week: Messrs. W. Rowland Ding, J. Lankester Parker, and W. Laidler. Machine: N.A.C. pusher biplane, 80 Gnome.

On Thursday bad luck brought about a broken piston and two connecting rods in the 80 Gnome. The machine has since been out and flying well.

Mr. Ding's 100 h.p. Anzani-Blackburn monoplane, fitted with dual control, has arrived, and is being rapidly assembled.

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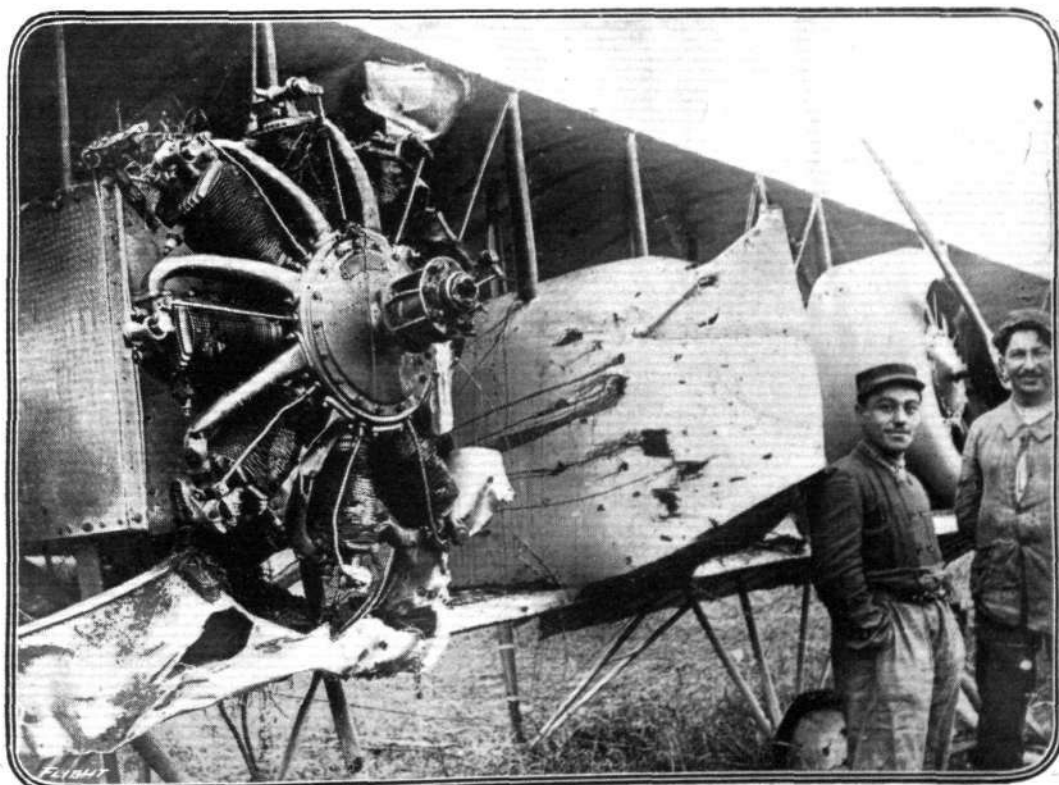
Eddies

FROM Adjudant Aviateur Louis Noel a short cheerful letter has come to hand just to let us, and, through us, his many friends on this side of the very useful strip of water, know that he is still alive. Beyond the bare fact that he is well, Noel as usual has little to say about himself, but from an accompanying photograph one gathers that he is still piloting his old faithful M. Farman, than which to Noel's way of thinking no better machine exists. Perhaps it would have been more correct to say that he is still flying an "M.F.," as it is hardly likely to be the same he was in charge of last time we heard from him; 'buses do not as a rule last so long as that anywhere "out there." Regarding two of his friends, however, Noel has good news to convey. Capitaine Oswald Watt, who, it will be remembered, is serving with the French

Aeronautique Militaire, has, Noel says, been mentioned very favourably in the *Citations*, and Charles Hubert, who was so well known to both *habitués* and visitors out at Hendon in the old days, has been awarded the *Croix de Guerre*.

✱ ✱ ✱

About the photo. on this page of the "strafed" Caudron, Noel explains that the machine was hit by a German shell almost in the motor when at a height of 2,200 metres. The 'bus caught fire, and things looked pretty serious for the pilot, who, thanks partly to his other motor and partly to sheer good piloting, managed to get back safely to the right side of the French lines. In another photo. is seen a batch of French *avions*, which includes M. Farmans, Caudrons, Morane "parasols," and



An excellent demonstration of the advantage of twin-engined machines. A Caudron biplane somewhat severely "strafed" by German shell fire.

Nieuport scouts. The latter, of which we published illustrations and particulars some months ago, are, I believe, proving highly successful, a fact which, as they are modelled on the lines of our scouts, is no mean compliment to the Sopwith Aviation Co., who were the first to demonstrate the high value of this type of machine as long ago as the summer of 1913.

x x x

Of other French pilots who are well known on this side, and who have received distinction for their excellent work in the service of *la Patrie*, I hear from a friend that Bielovucic, the well-known Peruvian aviator, who is serving with the French air services in the Escadrille Morane-Saulnier 26, has earned by his fearless reconnaissance flights over hostile country, the distinction of Chevalier of the Legion of Honour. Lieut. Louis Paulhan, who is serving with the French aviation corps in Servia, has been mentioned in despatches for his long reconnaissance and bombing trips. During a night flight he bombed an enemy aerodrome, and destroyed the searchlights that were trying to spot him.

x x x

I ran up against Beatty at Hendon last Thursday, and while talking about the chief thing that anybody was talking about that day—the Zep. raid—he told me of his experiences during the episode. He was enjoying a good play at a theatre in one of the districts visited as only a flying school instructor can enjoy it after a long day of hard work, when the bombs began to fall uncomfortably close. Although the audience was naturally somewhat nervous, there was nothing resembling panic, and it was

therefore somewhat of a surprise to Beatty to see a lady rushing up to him asking loudly for her husband. When he had explained to her the difficulty of telling her the whereabouts of her partner whom he had never seen, Beatty managed to get in a few words edgewise, and to ask the terrified woman if her husband had left her. On hearing that he had, and that she wanted very much to find him, Beatty tried to calm her by saying: "Well, if he has left you *here*, he ain't worth looking for." Whether the good lady saw it in that light is, however, doubtful; they rarely do, much to *our* great good luck.

x x x

Once outside the building Beatty found that his nice new Scripps-Booth car had been considerably "strafed" by a bomb, the radiator being unable to radiate any more, and the main plane of the wind screen shrunk to a little triangular piece in one corner of its framework. The mudguards had holes right through them. What a chance for a real big crop of free publicity for both Beatty and the very mobile Scripps-Booth car. But then we all know Beatty is the last man to take advantage of undue publicity!

x x x

From the Zep. topic my chat with Beatty turned to other subjects, and I was shown one of the new castings for the latest Beatty engines. So rapid have been the various steps in the development of this motor that it is a little difficult to keep time with the various changes; but one thing is certain, the new engine has its cylinders cast on the monobloc system, and the remarkable thing about it is that the rough casting of the monobloc engine



A snap somewhere "over there" from a Caudron biplane at a height of 2,000 feet. The machine in mid-air below is Louis Noel's Maurice Farman.



A fleet of avions at an air station "somewhere in France."

comes out 4 lbs. lighter than the rough castings of the four cylinders cast separately. In other respects the motor will be similar in every way to the previous model, and as regards appearance the latest type looks remarkably clean and free from "gadgets."

x x x

There seem to be prospects of a somewhat unusual flying match up at Hendon shortly. It is rumoured that Manton and one of the Pashley Brothers—which one of them I cannot tell, as I have given up trying to identify the two brothers apart years ago—will be having a match on box-kites somewhat after the style of the Garros-Hamel match in France. Of course, the speed of the new school 'buses is not so high as that of the Moranes used by Garros and Hamel, but the spectacle of spirals, banks and twists should be quite as exciting to watch, and both pilots are experts on this type of machine. So I'm hoping I shall be a witness of their exploits.

x x x

Now that the Zeps. have been over again, and have apparently returned to their lair, and have succeeded in killing off a few innocent civilians, and have not (except by rumours) been brought down, the question that everyone is asking everyone else is: What can be done? I had a conversation with one of our best-known pilots on that very subject the other day, and as he is a man of great experience, who has flown a variety of machines under a still greater variety of conditions, his opinion counts for a good deal. Briefly stated, his idea was this:

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The King and the Zeppelin Victims.

In the Court Circular from Buckingham Palace on Saturday it was stated:—

"The King and Queen, attended by the Countess of Airlie and Captain B. Godfrey-Faussett, R.N., visited this afternoon the civilians, men and women, in the Charing Cross Hospital, who were injured by bombs dropped by a Zeppelin in the streets of London on Wednesday evening last."

Military Aeronautics in France.

THE officials of the New French Advisory Committee for Military Aeronautics, referred to in our last issue, have now been appointed as follows:—

On all the pieces of landing grounds in and around London, not necessarily grounds that are being used as, or even suitable for, aerodromes, but which are big enough for a machine of the type to be used to land on with safety, there should be installed some form of illumination, any kind you like. Simple petrol flares arranged in a circle would do as well as anything, or if thought advisable, a proper scheme could be elaborated, taking as a basis the suggestions in this direction, published in "FLIGHT" some months ago. When word was received that the Zeps. were steering for the London district, a number of machines would be sent up from our aerodrome so as to reach the required altitude by the time the Zeps. arrived. With several of the suggested circles of light always in view the pilot would have the assurance that, should his engine peter out, he would be able to plane down to at least one of the grounds where a reasonably safe landing could be made. That the Zeps. would also see these circles of light would be of minor importance, since a bomb would not be likely to do much damage in an open space, and the Zep. pilots appear to be able to find London without great difficulty even when no lights are shown. The suggestion, coming as it does from a practical man, seems to have decided possibilities, and I venture to commend it to the careful consideration of the powers that be. At any rate, it can at worst hardly prove more futile than present arrangements, and at best might go a very long way towards solving the problem.

"ÆOLUS."

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President—M. Rene Besnard (Under Secretary of State for Military Aeronautics).

Vice Presidents—M. Appel and M. R. Esnault Pelterie (President of the Association of Aeronautical Industries).

General Secretary—Lieut.-Col. Mayer (Chief of Staff of the Under Secretary of State for Military Aeronautics).

Assistant Secretaries—MM. Granet (sec. A.Ae.I.), Cezanne, Besançon (sec. Ae.C.F.) and Capt. Estirac.

An Aero Research Fellowship at Oxford.

IT is announced that Mr. Idwal O. Griffith, M.A., formerly Fellow (second lieutenant in the Royal Flying Corps), has been elected to an ordinary Fellowship at St. John's College, Oxford, for physical research with special reference to aerial warfare.

A PROPELLER-SHAPING MACHINE.

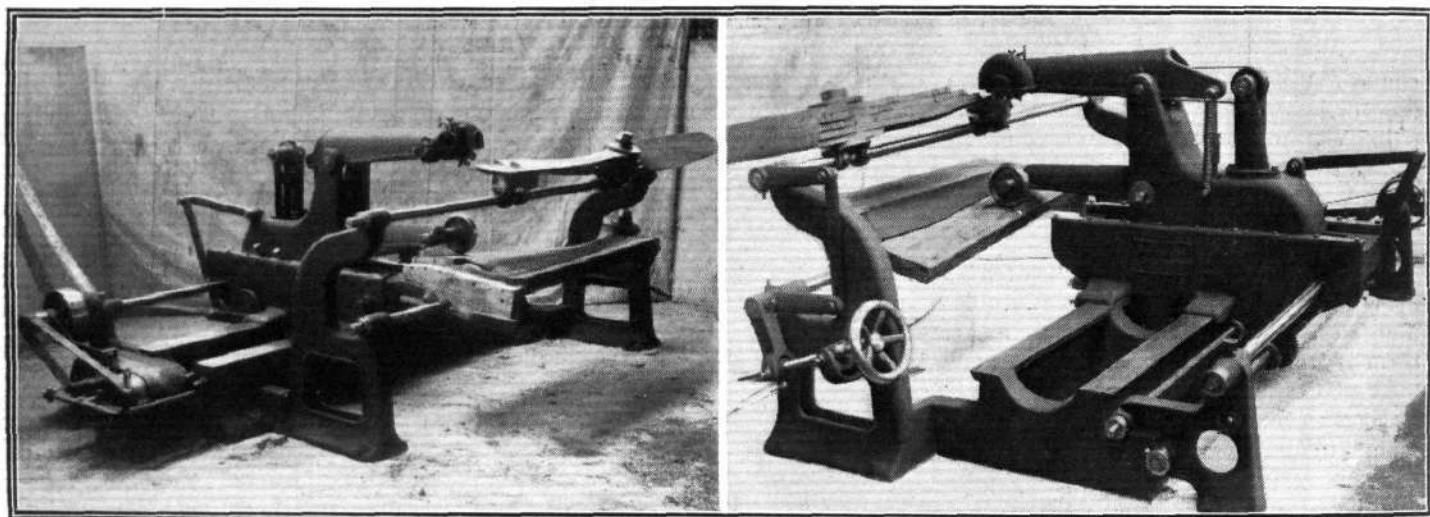
SOME little while back we described and illustrated an ingenious lathe designed by Messrs. Wadkin and Co., of North Evington, Leicester, by means of which exact facsimiles of an aeroplane strut are automatically produced. The firm have just recently turned out another useful machine for accurately shaping propellers from any given model. From the accompanying illustrations it will be seen that this machine is by no means complicated.

It will take propellers up to 12 ft. diameter, and will produce an exact facsimile of the "original" placed into the machine. This "original" consists of one blade only together with hub, which is mounted on a mandrel in a horizontal plane opposite to a carriage, which is longitudinally slidable on a bedplate. This carriage is adapted to support two pivoted arms, the lower one of which carries the original roller, and the top one the cutterblock, mounted on a reciprocating headstock. At their opposite ends the two pivoted arms are connected together by a link, which is adjustable, to enable the size of re-production to be varied if desired. The headstock

driving by open and crossed belts pulleys mounted upon a shaft, and thence by reduction gearing, to operate the forward displacement of the carriage. When this has reached the end of the blade the propeller is turned round upon its mandrel to bring the next blade into position, and cutting now takes place on the reverse traverse.

The support for the "original" and the work, as previously stated, consists of mounting them on a mandrel. The mandrels are each mounted on a pivoted flange plate having arms linked together, and provision is made for adjusting the inclination of the mandrels relatively to the headstock whilst the machine is running, to enable the work to be so regulated as to provide the minimum vertical displacement of the cutter arm during its traverse across the blade. The mandrels are, of course, locked securely in any position of adjustment.

As previously stated, the "original" consists of one blade and the hub portion, and is made preferably of cast iron, and corresponds identically in shape to the blade to be formed, thus enabling existing gauges and



The Wadkin propeller-shaping machine.

supporting these two arms is reciprocated transversely of the bed by means of a crank motion, so that the cutters will traverse across the work. As each end of the stroke is reached the carriage is moved longitudinally $\frac{1}{8}$ in., so that cutting takes place both on the forward and the backward stroke across the work, thus saving considerable time.

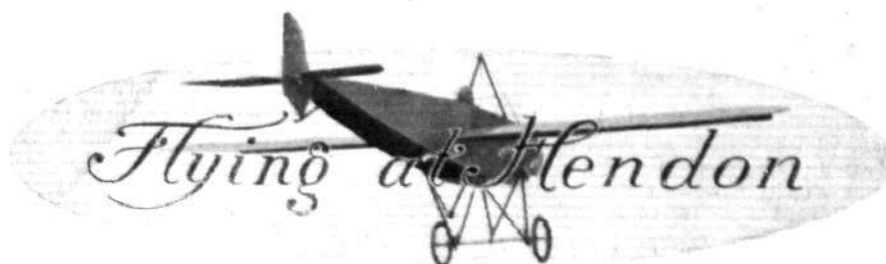
The cutterblock is fitted with 12 cutters, six on the front and six on the back. The spindle is mounted on ball bearings running in dust proof housings, and the end thrust is taken by a special double ball thrust washer. The drive is by means of a flat endless belt running over a two-step pulley, which is also mounted on ball bearings, and carried by a bracket fixed to the sliding headstock. A second flat endless belt now runs vertically downwards over guide pulleys, on to the driving pulley, which is fixed, and traverses with the carriage along a splined shaft. This shaft carries at one end a pair of fast and loose driving pulleys. The loose pulley runs on phosphor-bronze bush, and is fitted with a stauffer lubricator. This shaft also carries a pulley

templates to be used to ensure the accuracy of the "original." It is, of course, essential that the shape of the blade should be accurately kept along its longitudinal edges; means must therefore be provided to prevent the original roller falling abruptly. A few holes are therefore drilled and tapped along the edges of the "original" for securing to same a wooden guide which is shaped to enable the roller to run down a slight incline. When one face of the blade has been cut it is only necessary to reverse the work and also the original in its support.

Means are provided for securely holding both the original and the work whilst it is being cut.

A feature of the machine which is particularly important is that an old or broken propeller may be used as the "original" and an exact duplicate made from same.

The machine combines the best materials and workmanship throughout. It is built for hard continuous wear, and is provided with ample means for lubricating the various parts.



My recent experience of getting someone else to deputise for me was so pleasant, I endeavoured to lure other members of the staff on to try the experiment of writing these notes, but without success, so there is nothing for it but to resume responsibility myself once more. As a matter of fact, there is but little to report this week, for although both Saturday and Sunday last were ideal for flying, for some reason or the other the airwork on these occasions struck one as being rather "slow." Perhaps the reason for this was that I had only recently returned from a place where many different types of aircraft were to be seen busily engaged on "war service" and that I was over critical. However, it must be admitted that there was no lack of flying, if it was only very much of the usual. There were two incidents, though, of more than usual interest. First, early in the afternoon someone arrived on a pusher biplane and put up some astonishing, not to say at times alarming, stunts at a terrific speed, and then disappeared as quickly as he appeared—graciously leaving us the roof of the pavilion intact. The second incident consisted of two excellent loops executed by some pilot unknown, on a B.E.2c. As regards the other flyers, these comprised most of the usual Hendon pilots and machines. The G.W. stud, Marcus D. Manton, M. Osipenko, J. S. B. Winter and the latest addition, C. Pashley, were all busy

on the G.-W. school 'buses. Of course J. H. Moore was out on his 55 h.p. 'bus, and on one occasion he asked me to join up for a joy ride and see what the 'bus was like with the new engine—an invitation that was not refused. She flew well enough before, with the 45 h.p. engine, but now she seems to be able to do anything. Our get-off reminded me of the one I experienced with Chevillard on the Henry Farman. We cruised about for some 15 minutes, being for a greater part of the time at 2,000 ft. Here Moore brought out the various good points of the 'bus, such as speed variation, banking, &c. As Moore said it is certainly "some 'bus." J. H. Stevens was out on the 45 h.p. Hall-Caudron, W. Roche-Kelly banked on the 50 h.p. Beatty-Wright, and the "two Baumanns" did their turn on 60 h.p. R.-B.-Caudrons. A. S. Barrs took up the 125 h.p. Mann biplane for a 35-minute flight with a passenger. He made a fine trip, reaching an altitude of 3,500 ft., and executing all sorts of stunts.

On Sunday the programme was much the same—the same pilots and the same machines. In addition, however, C. M. Jacques made a flight on the 45 h.p. L. and P. biplane, and a Naval Lieutenant flew for his *brevet*, which he took in fine style on one of the new 60 h.p. G.-W. 'buses. A. E. Barrs made two flights on the Mann, which has now flown about 600 miles and taken up nine passengers.

✠ ✠ ✠ ✠ AIRCRAFT AND THE WAR.

THE war correspondent of the *Kölnische Volkszeitung* on the western front, in a report of the recent operations in the Champagne district, stated:—

"Enemy airmen are also showing extreme activity, which indicates, he thinks, the intention of the enemy to resume the offensive."

Karl Rosner, the correspondent in Champagne of the *Lokalanzeiger* telegraphed on the 11th inst.:—

"The artillery fire of the French during the day is directed by a very strong air service, and its aim is to interfere with our rearward communications and to shatter with iron our salients into enemy's positions."

A message to the *Journal* from Hazebrouck dated the 13th stated:—

"A German aviatik flew over the village of Lestrem, near Merville, and threw two bombs. One fell into a canal and the other on to the corner of a house, doing insignificant damage."

The *Echo de Paris* on the 14th reported:—

"A Zeppelin at 11 o'clock last night flew over Château Thierry and dropped 5 bombs, which fell outside the town, killing no one and causing no damage. The raider succeeded in regaining its lines."

A Central News message from Amsterdam on the 14th stated:—

"During the recent air raid on Ghent ten German soldiers were killed and several injured by the bombs of the Allied airmen."

A Reuter message from the same place reported:—

"Aviators have dropped letters on Ghent bearing the words 'Courage, we are coming. You will soon be liberated from the German yoke.'"

The *Times* correspondent at the British Headquarters, writing on October 14th said:—

"The capture, or destruction, of German airplanes is too common an event to call for special mention in each instance, but there were special circumstances about the bringing down of two on Monday last which, perhaps, justify the facts being put on record."

"The first machine which was driven to earth was a brand new type of Albatros, and I saw both it and its two occupants to-day. The two German airmen gave me a spirited account of how they were attacked both by our anti-craft guns and also by four British airplanes. They professed to make light of the shooting of our guns—though the pilot declared that one shell burst so near him that his airplane was nearly capsized by it—but they declared that our airmen manoeuvred on all sides of them, and poured such a hot fire in upon them that gradually, having only a carbine with which to reply, they were forced down from 7,000 ft. to 300 ft., and eventually were compelled to land."

"The Albatros, it must be stated, showed no signs of this terrific struggle. Everything aboard her was as spick and span as is the case with a new machine, and the only scars she bore were two bullet holes in the fuselage just behind the second (the pilot's) seat. The version too, which I got from our own men went to show that the machine was not handled with as much skill and daring as German airmen have frequently displayed. The Albatros came to ground very rapidly after fire had been opened on her, and neither of the occupants was touched. The observer's complaint, however, that he only had a carbine was an undeniable fact, and I saw for myself that there was no attachment for a machine-gun on the fuselage."

"The second machine—which was an Aviatik, and fitted with a *mitrailleuse*—put up a more gallant fight. It was chased by seven of our machines, which pursued it in the direction of Lille. The German machine managed to elude all our airplanes except one, which headed it off and drove it back towards our other airmen,

who finally brought it down. The observer in this machine was badly wounded in the thigh, and his pilot—an *Offiziersaspirant*—was by no means communicative. The curious thing in his case was that, having reached his own lines at Lille, he did not come to earth, as apparently he could easily have done.

"It would be no compliment either to the Royal Flying Corps or to the many German airmen who have displayed great gallantry to suggest that such 'cheap' captures are the rule, but the two incidents taken together show the moral advantage which we have gained from our practice of giving or accepting battle on all occasions."

Mr. Philip Gibbs, writing to the *Daily Telegraph* from General Headquarters, under date of Sunday, of the recent German attacks on their lost positions round Loos, said:—

"For a considerable time a German aeroplane remained over our lines, flying at a great height, and directing the artillery fire. . . . Meanwhile the enemy's artillery had established a very intense *tir de barrage*, or curtain, of shrapnel and high explosives behind our lines to prevent supports from coming up, while one of their aeroplanes flew no higher than 2,000 ft. directing their guns."

The *Daily Mail* correspondent in the North of France, writing on Monday, said:—

"Our aircraft have seldom, if ever, had greater success than in the recent exchanges north of Arras. No fewer than four German aeroplanes were brought down on two consecutive days. One of

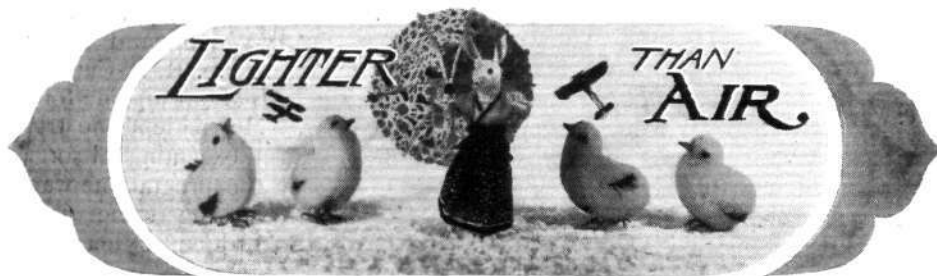
them, damaged by two bullets through the radiator, came down safely in our lines with the two occupants uninjured.

"But the success has not been so much in the destruction of the enemy's craft as in the temporary and partly inexplicable dominance of the air. At one part of the front it is rare to see any German machine within range of our lines except in the dusk of evening, when most of our men have returned. Then, very high up, a few of the dusk birds appear out of the east and peer vainly down through the failing light and between the puffs of smoke from bursting shells, peculiarly visible at this hour.

"Perhaps never during the war has the German artillery had less help from aerial observers or our artillery more help. And it is impossible to describe how great a difference, practically and morally, it makes when your battery receives from that speck above the enemy's lines the magic wireless message of those two most British initials, 'O.K.'"

"At the same time some German flyers have shown great skill and courage. One this week escaped the onset of four of our aircraft by astute jockeying and speed. The Germans possess a few men of quite exceptional skill in firing from their machine, and their anti-aircraft guns are wonderful. But on the whole they are beaten in the art of flying, and are outnumbered.

"There has been no repetition of that dominance which they temporarily enjoyed in one quarter of the fighting in the early part of the second battle of Ypres. It was the restoration of our air supremacy there which, more than anything else, finally retrieved the position."



Countering the Zeppelin.

SCHOOL PORTER: "I found the 'Not to be used except in the case of fire' placard those third-form boys stole out of the corridor, sir."

HOUSE MASTER: "Where?"

SCHOOL PORTER: "They had nailed it over the coal-bin, sir."

Lucky it wasn't an Aeroplane!

ONE evening recently an Irishman in London stood looking over Hyde Park with intense admiration, when without any notice a small fly buzzed into his eye, bringing tears and prayers in plenty. He blinked, and winked, and rubbed his eye. "Wisha, bad scan to ye," said he. "Wasn't the whole of Hyde Park big enough for you to fly in?"

Raid Mems.

A CORRESPONDENT sends us the following, which was overheard outside a public-house during the Zeppelin raid last week:—

ELDERLY WOMAN: "Oh, Bill, I shall 'ave to 'ave a drop o' brandy."

BILL: "All right, old girl; but yer'll 'ave to pay for it yerself—I musn't treat yer."

The correspondent adds that this story is "absolutely true."

SIR JOHN JELlicoe "doesn't like the limelight." Nor do the Zeppelins.

THE man to deal with the night clubs—Count Zep.—*The Star*.

Mems. about Zeppelins.

ZEPPELINS are apparently very vulnerable and easily brought down. We have it on good authority that no less than eleven are at present lying on various commons and waste lands in "the London district."

Zeppelins always fly right over other people's houses, and invariably so low that the occupants could (if so minded) have touched them "with an umbrella."

The number of bombs dropped by a single Zeppelin is about 7,000. Everybody knows somebody who has a "hole in the back garden big enough to take two (or sometimes three) motor cars."

The special constable who, on seeing Lord Haldane's figure looming through the darkness, raised a cry of "Zeppelins!" and rang up the fire brigade, has been severely censured.

"Those who have never been in a Zeppelin," says one of our brilliant thinkers, "can have no idea of what it is like." Jonah, it is said, made a very similar remark when he came out of the whale.—*Books of To-day and To-morrow*.

AS LONG AS THE WORLD GOES 'ROUND.

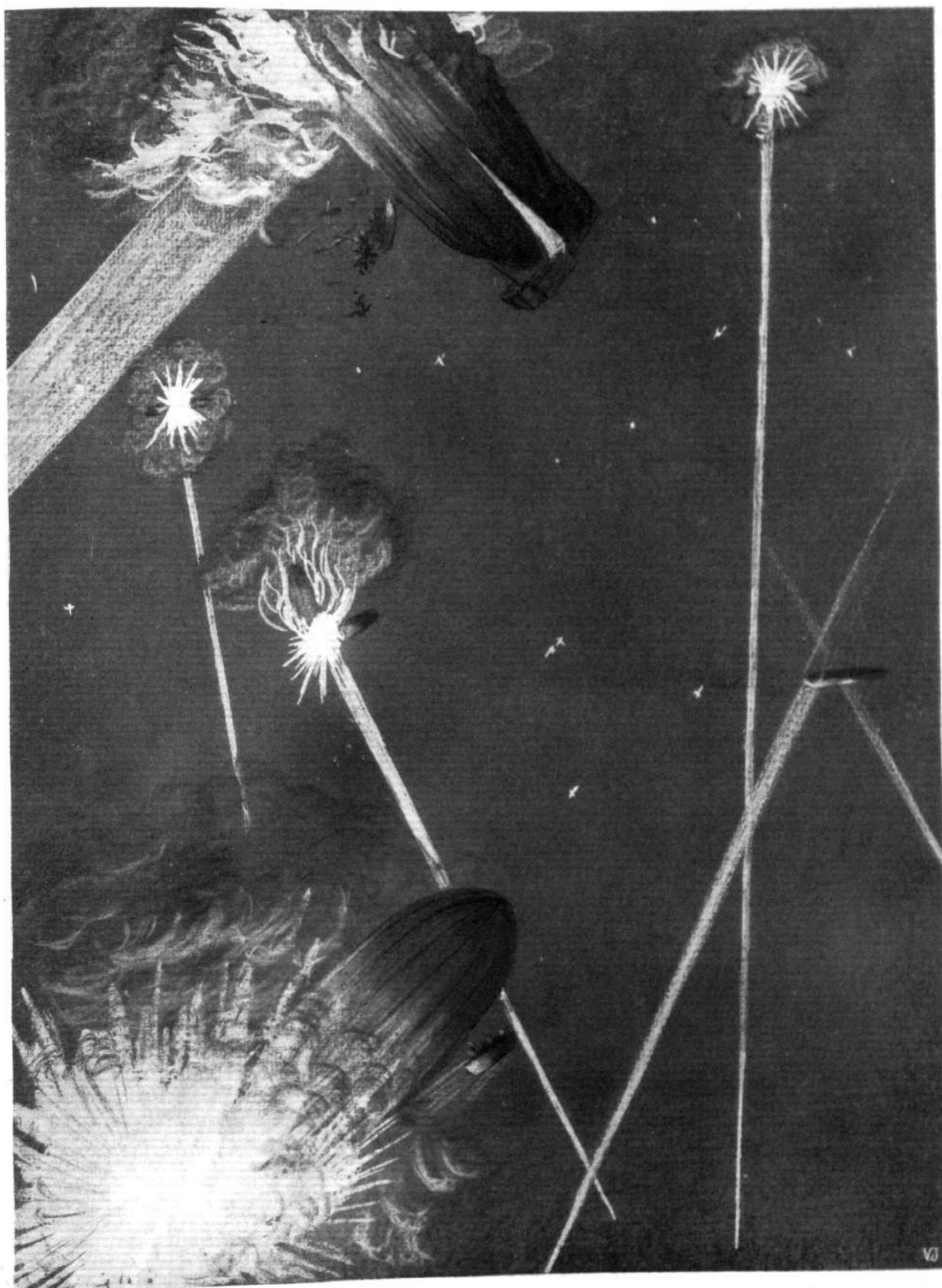
The Young Man Who Can Take the Girl Riding Has It All Over the Young Man Who Can't

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AN instance of how German frightfulness in the shape of Zeppelin visits affects our young folks may be told. The small son of a near neighbour was asleep in his bed when the first air battle began last week. His parents thought it would be well to remove him to their

own bed. He awoke during the process of removal, and asked "what was the matter?" He was told that the Zeppelins had come. He replied: "If they have, that's no reason why I should warm someone else's bed."—*Daily Chronicle* "Office Window."



ZEP. "STRAFING" DEVICES. By "FLIGHT'S" Tame Inventor.
No. 6 (and last).—The Ultra-Vériot Rays. N.B.—The amazing details of this infallible device have been rigorously suppressed by the Censor.

Zeppelins Over Holland.

A ZEPPELIN passed over Vaals and Heerle, which are both within the Dutch frontier, at nine o'clock on the morning of the 15th, going in the direction of Aix-la-Chapelle.

In the "wireless" news sent out from Berlin on Monday, it was stated that the German Government had apologised for the passage of Zeppelins over Holland.

A Damaged Zeppelin Raider.

THE *Morning Post* correspondent at Amsterdam, writing under date October 14th, said:—

"Zeppelins again flew over Holland early this morning. The Zeppelin 'L Z 77' was sighted in several towns of the southern part of Holland. The airship came from the west, and disappeared in the direction of Belgium.

"A telegram from Sittard to the *Maasbode* says that the airship was evidently damaged.

"At some places Dutch soldiers fired on the vessel. Two other Zeppelins, also coming from a westerly direction, were seen at the islands of Vlieland and Terschelling. One of them made its way between those two islands, and both were heavily fired at by the Dutch coastguards. They disappeared in a north-easterly direction."

Tales the Germans Tell.

In the "wireless" news sent out from Berlin on Monday there was the following:—

"It is reported from Amsterdam that the crew of the Dutch steamer 'Texel Astroom,' which was destroyed by a mine, have returned from London, and they were present on the occasion of the Zeppelin attack. They state that they prefer a mine explosion, because they do feel safe when once in their boats, but when a Zeppelin is overhead nobody knows if he is safe. The crew were in a Sailors' Home when the Zeppelin attack was being made. A Belgian hotel in the neighbourhood was destroyed by a bomb, and six persons were buried under the ruins. All the windows in the Sailors' Home were shattered. The Zeppelin returned after a two hours' stay, and bombarded Southend."

A Zeppelin Raid on the Finnish Coast.

IN a message from Stockholm on the 14th inst., the *Morning Post* correspondent stated that a Zeppelin raid was reported on the Finnish Coast in the Gulf of Finland, causing a fire.

Count Zeppelin for a Wurtemberg Parliament.

INFORMATION received in Amsterdam on October 13th, was to the effect that Count Zeppelin had become a candidate for membership of the First Chamber of the Wurtemberg Diet, in place of Count von Zeppelin Aschhausen, who died a short time ago. There seems to be no doubt that Count Zeppelin would be elected.

Germany's Airship Losses.

UNDER the heading of "Cost of the War in Airships," Mr. Ladislav d'Orcy has summarised in the *Scientific American*, from the details which have appeared from time to time, the losses which have been sustained from one cause or another by the Austro-German airship fleets during the first thirteen months of the War. At the conclusion of the article he summarises the losses in the following table:—

Germany's and Austria's Airship Losses from the Beginning of the War up to September 15th, 1915.

Month.	Zeppelin	Other	Fate
1914.	Airships.	Airships.	of the Crew.
August ...	2	—	{ 12 killed
September ...	1	3 (2)†	{ 12 prisoners
October ...	—	—	{ 81 prisoners*
November ...	1	1	{ ?
December ...	—	2	{ ?
1915.			
January ...	1	1	{ 16 killed
February ...	2 (1)†	1	{ 7 prisoners
March ...	2	—	{ 16 killed
April ...	1	—	{ 27 interned
May ...	2	1	{ 33 killed
June ...	2	1†	{ 11 killed
July ..	—	—	{ 40 prisoners
August ...	2	—	{ 23 killed*
Sept. 1st-Sept. 15th	1	—	{ 11 killed*
			{ 10 prisoners
			{ 4 killed
Total ...	17	10	{ 126 killed
			{ 138 prisoners
			{ 27 interned

* Estimate based on the regulation crew of a naval Zeppelin (16), a military Zeppelin (12), and a Parseval (6).

† Austrian airship.

Mr. Orville Wright and the Wright Company.

ACCORDING to information received from Dayton, Ohio, via New York, Mr. Orville Wright has sold his interest in the Wright Company to a New York syndicate for a sum of about one and a half million dollars. It is said that he will in future devote the whole of his time to aeronautical research work, and that the Wright Company will have the first benefit of his inventions.

Death of a Pioneer.

THE death was reported from Barking, on the 14th inst., at the age of 75, of Mr. Philip James King, who was well known in shipbuilding circles, having been connected with the Thames Ironworks. It is stated that the first English balloon to cross the Channel was designed by him, as was also the fish balloon—probably the forerunner of the present British airship—and the owl balloon, which stood 90ft. from the top of the head to the car.

For Transparent Windshields, &c.

FIRMS who are engaged in the manufacture of Government as well as other types of aircraft should note that the London Label Co., Ltd., of Beckton Road, Plaistow, E., are specialising on non-inflammable transparent sheets for such fittings and accessories as windshields, map covers, panels, instrument board labels, &c. Several of these fittings for B.E.2c, R.E.7, and F.E.2b machines they keep in stock, so that they are able to give early delivery when required.

F.N.B. Pilots' Portraits.

IT may be noted that the portraits of pilots who have recently taken their certificates at the Beatty School, which appeared in our last issue, were from the F.N.B. series. Mr. F. N. Birkett informs us that his studio, at 97, Percy Road, Hammersmith, is now open, and sittings can be arranged, by appointment only, between 10.30 and 3.30 on any day. Pilots who wish to be taken in flying costume need not bother to take their equipment, as Mr. Birkett has the necessary gear, while the other accessories of his up-to-date studio include a most realistic background in colours, &c.

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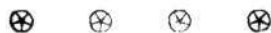
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